

CITY OF WAKEFIELD.

---

# REPORT

ON THE

PUBLIC HEALTH

AND

SANITARY STATE

OF THE

CITY OF WAKEFIELD

FOR THE YEAR 1934.

BY

THOMAS GIBSON, M.D., C.M., D.P.H.,  
MEDICAL OFFICER OF HEALTH.



CITY OF WAKEFIELD.

---

REPORT

ON THE

PUBLIC HEALTH

AND

SANITARY STATE

OF THE

CITY OF WAKEFIELD

FOR THE YEAR 1934.

BY

THOMAS GIBSON, M.D., C.M., D.P.H.,  
MEDICAL OFFICER OF HEALTH.

# I N D E X .

	Page.
Anti-Diphtheria Immunisation Clinic ... ..	35, 94
Ante-natal Clinic ... ..	112
Artificial Sunlight Clinic ... ..	137
Atmospheric Pollution ... ..	47
Bacteriological Reports ... ..	98
Births ... ..	4
Blindness ... ..	144
Cancer—Special Report ... ..	14
Cerebrospinal Fever ... ..	82
Child Welfare Centres ... ..	122
Common Lodging Houses ... ..	45
Deaths ... ..	6
Diphtheria ... ..	77
Disinfection ... ..	97
Dysentery ... ..	81
Enteric Fever ... ..	81
Factories, Workshops and Workplaces ... ..	65
Food and Drugs—Analysis of ... ..	55
Health Education ... ..	144
Health Services ... ..	29
Health Visitors—Home Visiting ... ..	121
Hospitals—Infectious Diseases ... ..	35, 83
New Municipal Hospital, Snapethorpe ... ..	88
Maternity ... ..	35, 115
Housing—General ... ..	67
Houses-let-in-Lodgings ... ..	46
Infectious Diseases ... ..	77
Legislation in Force ... ..	34
Local Government Act ... ..	35
Marriages ... ..	4
Maternal Mortality—Special Report ... ..	127
Maternity and Child Welfare ... ..	111
Measles ... ..	81
Meat Inspection ... ..	60
Mental Deficiency ... ..	140
Meteorological Table ... ..	147
Midwives ... ..	32, 34, 111
Milk Supply ... ..	50
Offensive Trades ... ..	64
Officers—Public Health ... ..	29
Ophthalmia Neonatorum ... ..	120
Orthopædic Clinic ... ..	135
Pemphigus Neonatorum ... ..	121
Pneumonia ... ..	81
Postnatal Clinic ... ..	118
Puerperal Fever and Pyrexia ... ..	120
Sanitary Circumstances of the Area ... ..	36
Sanitary Inspection ... ..	39
Slaughterhouses ... ..	59
Scarlet Fever ... ..	79
School Medical Service ... ..	143
Statistics—General ... ..	4
Tuberculosis ... ..	99
Tuberculosis Dispensary ... ..	102
Tuberculosis—Sanatoria ... ..	104
Vaccination ... ..	98
Venereal Diseases ... ..	109
Verminous Houses, Disinfestation, etc. ... ..	73
Vitamins A and D in Pregnancy—Special Report ... ..	125
Whooping Cough ... ..	82



PUBLIC HEALTH DEPARTMENT,  
TOWN HALL CHAMBERS,  
WAKEFIELD,

14th May, 1935.

*To the Mayor, Aldermen and Councillors  
of the City of Wakefield.*

MR. MAYOR, LADIES AND GENTLEMEN,

I beg to submit for your information and consideration a Report on the Public Health and Sanitary State of Wakefield for the year 1934.

In the preparation of this Report, which follows the lines required by the Ministry of Health, I have received valuable assistance from many colleagues, particularly from Dr. Allardice, who has prepared the Reports on Immunisation against Diphtheria, and Mental Deficiency, from Dr. Eeles, who has prepared the Maternity and Child Welfare Section, and from Mr. Roberts, who has prepared the Sanitary Administration Section.

I should like to take the opportunity of expressing my appreciation of the ungrudging help and loyal co-operation given me by all the Staff of this Department, both in the Town Hall and at the Hospitals.

I am,

Yours faithfully,

THOMAS GIBSON,

*Medical Officer of Health.*

## (1) GENERAL STATISTICS.

Area	...	...	...	...	...	...	4,970 acres
Population	(a)	Census, 1931	...	...	...	...	59,122
	(b)	Estimated by Registrar-General, mid-year, 1934	...	...	...	...	60,300
Number of Inhabited Houses:							
	(a)	Census, 1931	...	...	...	...	14,219
	(b)	End of 1934, according to Rate Books	...	...	...	...	15,300
Rateable Value, 1st April, 1934	...	...	...	...	...	...	£351,416
Sum represented by a penny rate, 1934-35	...	...	...	...	...	...	£1,376

**Population.**

The total population at the middle of 1934, as estimated by the Registrar-General, was 60,300. The institutional population was 3,644, of which 3,080 were non-residents, and 566 were residents. The net population, excluding non-residents, was therefore 57,220, and this figure has been used as the basis for calculating the rates given in this Report, other than the infectious diseases attack rates, which are calculated on the total population.

## (2).—EXTRACTS FROM THE VITAL STATISTICS OF 1934.

(1) **Marriages.**

434 marriages were celebrated, equal to a marriage rate of 15.2 persons married per 1,000 of the population, as compared with 13.4 in 1933, 16.1 in 1932, 17.3 in 1931, and 16.4 the average for the ten years 1924-33. The number of marriages was 50 more than in 1933.

(2) **Births.**

Excluding 103 non-resident births, and including 27 resident births which occurred outside the City, the total number of births registered in the City was 914 (467 males and 447 females), giving a birth rate of 16.0 per 1,000 of the population, as compared with 15.8 in 1933, and 17.9 the average for the ten years 1924-33. The number of live

births in 1934 was 8 more than in 1933. The birth rate in England and Wales in 1934 was 14.8, and in the large towns 14.7. Of the live births, 39 (4.27 per cent.) were illegitimate. In addition, 36 resident and 13 non-resident still-births were registered.

Under the Notification of Births Act, 1,015 births were notified, 584 from dwelling-houses and 431 from institutions. Of the home confinements, 359 were attended by doctors and 225 by midwives. (Births are given as attended by doctors when doctors were booked for the confinement, and by midwives when midwives only were booked, irrespective of whether doctors were called in by midwives under the rules of the Central Midwives Board). The institution births include 329 in the Municipal Maternity Hospital, 38 in the County Hospital, 47 in private maternity homes, 8 in a private nursing home outside the City, 4 in the Clayton Hospital, 3 in the West Riding Mental Hospital, 1 in a private nursing home within the City, and 1 in a Women's Hospital in another town. Of the institution confinements, 346 were attended by midwives and 85 by doctors. Of the registered births, 25 (2.7 per cent.) were not notified, as compared with 2.7 per cent. in 1933 and 3.8 per cent. in 1932. 43 (4.23 per cent.) of the notified births were still-births.

### **Remarks on the Birth Rate.**

The decline in the birth rate, which has been noted for a number of years past, was checked in 1934, although the rate was but slightly higher than that of 1933. The number of marriages in 1934 was substantially higher than in 1933, and there would seem a likelihood of the birth rate being maintained, if not increased, in 1935. The Wakefield birth rate also continues at a higher level than that of the country generally. At the same rate as that of the country generally, the number of births in Wakefield would have been 72 fewer than actually occurred. The births for the year also exceeded the deaths by 255, which represents the natural increase of the population during the year. The proportion of illegitimate births, which is usually round about 3 per cent., went up during 1934 to 4.23 per cent.



## CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1934.

Causes of Death.				Nett deaths at the sub-joined ages of Residents whether occurring within or without the district.									
				Total All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and under 75 years.	75 years and over.
All Causes	Certified ...	...	...	659	49	7	14	31	18	96	182	159	103
	Uncertified	...	...	—	—	—	—	—	—	—	—	—	—
Typhoid and Paratyphoid Fevers				—	—	—	—	—	—	—	—	—	—
Measles ... ..				2	1	1	—	—	—	—	—	—	—
Scarlet Fever ... ..				3	1	—	2	—	—	—	—	—	—
Whooping Cough ... ..				—	—	—	—	—	—	—	—	—	—
Diphtheria ... ..				26	—	1	6	18	1	—	—	—	—
Influenza ... ..				9	—	—	1	—	—	1	6	1	—
Encephalitis Lethargica ... ..				—	—	—	—	—	—	—	—	—	—
Cerebrospinal Fever ... ..				4	—	1	1	—	—	1	1	—	—
Tuberculosis of Respiratory System ... ..				34	—	—	—	1	5	16	12	—	—
Other Tuberculous Diseases ... ..				3	1	1	—	—	1	—	—	—	—
Syphilis ... ..				4	2	—	—	—	—	—	2	—	—
General Paralysis of the insane, tabes dorsalis ... ..				1	—	—	—	—	—	—	1	—	—
Cancer ... ..				81	—	—	—	—	—	10	37	25	9
Diabetes ... ..				2	—	—	—	—	—	1	1	—	—
Cerebral Hæmorrhage, etc. ... ..				82	1	—	—	—	—	2	20	40	19
Heart Disease ... ..				119	—	—	—	4	1	13	34	40	27
Aneurysm ... ..				—	—	—	—	—	—	—	—	—	—
Other Circulatory Diseases ... ..				12	—	—	—	—	—	—	—	5	7
Bronchitis ... ..				40	1	—	1	—	—	1	14	10	13
Pneumonia (all forms) ... ..				33	7	2	1	1	—	9	8	3	2
Other Respiratory Diseases ... ..				6	—	—	—	—	1	2	2	—	1
Ulcer of Stomach and Duodenum				8	—	—	—	—	—	1	6	1	—
Diarrhœa, etc. ... ..				6	5	—	—	—	—	1	—	—	—
Appendicitis ... ..				7	—	—	—	1	1	3	2	—	—
Cirrhosis of Liver ... ..				1	—	—	—	—	—	1	—	—	—
Other Diseases of Liver, etc. ... ..				3	—	—	—	—	—	—	2	—	1
Other Digestive Diseases ... ..				2	—	—	1	—	—	—	1	—	—
Acute and Chronic Nephritis ... ..				33	—	—	—	1	—	7	10	11	4
Puerperal Sepsis ... ..				4	—	—	—	—	—	4	—	—	—
Other Puerperal Causes ... ..				6	—	—	—	—	2	4	—	—	—
Congenital Debility, Premature Birth, Malformations, etc. ... ..				24	23	—	—	1	—	—	—	—	—
Senility ... ..				24	—	—	—	—	—	—	1	6	17
Suicide ... ..				10	—	—	—	—	2	6	2	—	—
Other Violence ... ..				21	3	—	—	2	3	2	7	2	2
Other Defined Causes ... ..				48	4	1	1	2	1	11	13	14	1
Causes Ill-defined or Unknown ... ..				1	—	—	—	—	—	—	—	1	—
Totals ... ..				659	49	7	14	31	18	96	182	159	103



The total number of deaths registered in Wakefield during 1934 was 976, including 343 non-residents. In addition, 26 deaths of residents occurred outside the City. The number of resident deaths was therefore 659 (354 males and 305 females), giving a crude death rate of 11.5 per 1,000 of the population, as compared with 13.8 in 1933, and 13.1 the average for the ten years 1924-33.

The "crude" death rate given above, however, requires to be modified in order to make it comparable with the rates in other areas, where population may be constituted differently from that of Wakefield; this is done by multiplying the crude rate by a comparability factor supplied to each area by the Registrar-General. In the case of Wakefield, the factor is 1.08, which gives a "corrected" rate of 12.4.

In 1934, the number of deaths was 132 less than in 1933. The 1934 general death rate in England and Wales was 11.8, and in the large towns 11.8.

All the deaths were certified. 217 (33 per cent.) of the resident deaths occurred in institutions.

The number and percentage of deaths at the various age periods were:—

Age period.			Number of Deaths, 1934	Percentage 1934.	Percentage 1933.
Under 1 year	...	...	49	7.4	8.5
1—2 years	...	...	7	1.1	2.1
2—5	„	...	14	2.2	3.0
5—15	„	...	31	4.7	4.8
15—25	„	...	18	2.7	3.0
25—45	„	...	96	14.6	12.4
45—65	„	...	182	27.6	26.8
65—75	„	...	159	24.1	21.9
75 years and over	...	...	103	15.6	17.5
Total	...	...	659	100.0	100.0

The following table gives the chief causes of death:—

Causes of Death.	No. of deaths 1934.	Males.	Females.	Percentage of total deaths 1934.	Percentage of total deaths 1933.
Heart Disease ...	119	56	63	18.1	15.8
Cerebral Hæmorrhage	82	44	38	12.4	9.5
Cancer ... ..	81	40	41	12.3	11.6
Bronchitis ... ..	40	21	19	6.1	6.6
Tuberculosis (all forms)	37	25	12	5.6	4.7
Pneumonia (all forms)	33	21	12	5.0	6.4
Acute and Chronic Nephritis ... ..	33	21	12	5.0	2.9
Diphtheria ... ..	26	12	14	3.9	2.4
Congenital Debility, Premature Birth, Malformations, etc. }	24	16	8	3.6	4.8
Senility ... ..	24	8	16	3.6	6.4
Violence ... ..	21	16	5	3.2	1.9

There were 119 deaths from Heart Disease (56 males and 63 females), giving a death rate of 2.01, as compared with 2.19 in 1933 and 1.87 the average for the ten years 1924-33. The number of deaths was 6 less than in 1933. 85 per cent. of the deaths were of persons 45 years of age and over, and 23 per cent. of persons 75 years of age and over.

There were 82 deaths from Cerebral Hæmorrhage (44 males and 38 females), giving a death rate of 1.43, as compared with 1.29 in 1933 and 1.41 in 1932.

There were 81 deaths from Cancer (40 males and 41 females), giving a death rate of 1.41 per 1,000 of the population, as compared with 1.61 in 1933 and 1.42 the average for the ten years 1924-33. The number of deaths was 11 less than in 1933.

There were 40 deaths from Bronchitis (21 males and 19 females), giving a death rate of 0.70, as compared with 0.91 in 1933 and 1.11 the average for the ten years 1924-33. The number of deaths was 12 less than in 1933.

There were 37 deaths from Tuberculosis (all forms) (25 males and 12 females), giving a death rate of 0.65, as compared with 0.65 in 1933 and 0.96 the average for the ten years 1924-33. The number of deaths was the same as in 1933.

There were 34 deaths from Pulmonary Tuberculosis (23 males and 11 females), giving a death rate of 0.59, as compared with 0.52 in 1933, and 0.70 the average for the ten years 1924-33.

The number of deaths was 4 more than in 1933.

There were 3 deaths from Non-pulmonary Tuberculosis (2 males and 1 female), giving a death rate of 0.05, as compared with 0.12 in 1933, and 0.26 the average for the ten years 1924-33. The number of deaths was 4 less than in 1933.

There were 33 deaths from Pneumonia (21 males and 12 females), giving a death rate of 0.58 as compared with 0.89 in 1933, and 1.05 the average for the ten years 1924-33. The number of deaths was 18 less than in 1933.

There were 5 deaths of infants under 2 years of age from Diarrhoea and Enteritis, giving a death rate of 5.5 per 1,000 live births (1934) as compared with 7.7 in 1933 and 12.6 the average for the ten years 1924-33. The corresponding rate for England and Wales during 1934 was 5.5, and the large towns 7.4.

The number of infantile deaths (i.e., under one year of age) was 49 (33 males and 16 females), giving an infantile mortality rate of 54 per 1,000 live births, as compared with 74 in 1933 and 77 the average for the ten years 1924-33. This figure is the lowest on record for the City, the only years in which the rate approaches that of 1934 being 1930 (58) and 1928 (59). The corresponding rate for England and Wales in 1934 was 59, and in the large towns 63.

In the first quarter of the year, the rate was 88, in the second quarter 57, in the third quarter 35, and in the fourth quarter 35. The legitimate infantile mortality was 54 per 1,000 legitimate live births, and the illegitimate 51 per 1,000 illegitimate live births.

The neonatal mortality (i.e., the mortality during the first month of life) was 27 per 1,000 live births, as compared with 45 in 1933, and 35 the average for the ten years 1924-33.



The infantile mortality in the various Wards was as follows:—

Alverthorpe ...	98	Northgate ...	62	Belle Vue ...	23
Primrose Hill...	77	North Westgate	61	Sandal ...	19
Calder ...	68	Kirkgate ...	54	St. John's ...	18
Eastmoor ...	64	South Westgate	44		

The causes of infantile mortality were:—Congenital Debility, Premature Birth, Malformations, etc., 23, Pneumonia 7, Diarrhœa, etc., 5, Violence 3 (accidental suffocation 2, burns 1), Syphilis 2, Measles 1, Scarlet Fever 1, Non-pulmonary Tuberculosis 1, other causes 6.

15 per cent. of the infantile deaths occurred in the first week of life, 47 per cent. in the first month, and 82 per cent. in the first six months.

The mortality amongst males were 71 per 1,000 male births, and amongst females, 36 per 1,000 female births.

There were 10 maternal deaths from diseases and accidents of pregnancy and parturition, giving a mortality of 10.54 per 1,000 total (live and still) births, or 10.94 per 1,000 live births only, as compared with 6.62 per 1,000 live births in 1933 and 5.42 per 1,000 live births the average for the ten years 1924-33. The corresponding rates for England and Wales are 4.41 per 1,000 total births, or 4.60 per 1,000 live births only.

There were 4 deaths from Puerperal Sepsis included in the above, and in two cases the illness followed an abortion.

Six deaths occurred in the Clayton Hospital, two in the Maternity Hospital, one in the County Hospital, and one at home.

The 21 deaths from Violence included 8 from vehicular accidents, 5 from falls, 2 from drowning, 2 from burns, 2 (infants) from accidental suffocation, 1 from a colliery accident, and 1 from internal injuries received whilst playing football.



There were also 10 suicidal deaths, 6 by drowning, 2 by hanging, and 2 by coal-gas poisoning.

Of the deaths registered during the year, inquests were held in 91 cases, 60 on residents and 31 on non-residents.

### **Remarks on the Death Rate.**

The death rate for Wakefield in 1934, based on the method of calculation hitherto employed, is 11.5 per 1,000 of the population, which is 2.3 per 1,000 less than that of 1933, and the lowest death rate on record for the City with the exception of that of 1928, which was 11.2 per 1,000. It is also, apparently, a lower rate than that of the whole country, an achievement which Wakefield has not previously attained. Unfortunately for our prestige, the Registrar-General has been working out, on the 1931 Census figures, a factor which he calls the "comparability factor" for each administrative area in the country, and by multiplying the crude mortality rate by this factor, a rate is obtained which is more accurately comparable with the rates of other areas, and of the whole country. By applying this factor, the extent to which a given population varies in sex and age composition from that of the country as a whole is levelled out, and the mortality rate obtained is valid for comparison with other rates obtained by the same procedure. The death rate for Wakefield, corrected in this way, is 12.4, and so Wakefield has still a higher mortality rate than the whole country, though probably it still remains a record rate for the City itself. The fact that there were 132 fewer deaths in 1934 than in 1933 is clear evidence of the marked decline in the death rate. The decline was most marked in the following groups of causes of death: — Senility, Influenza, Pneumonia, Bronchitis, Circulatory Diseases (other than Heart Disease), and Congenital Debility. There was actually an increase in certain groups, particularly the following:—Nephritis, Cerebral Hæmorrhage, Diphtheria, Pulmonary Tuberculosis, and Syphilis.

Heart Disease continues to head the mortality list, although the number of deaths was slightly less than in 1933. It should, however, be noted that the term "heart disease" includes not only valvular disease, but also myocardial disease, much of which is of the nature of

degeneration, and not infrequently accompanies senile decay. Out of 119 deaths attributed to Heart Disease, 52 (44 per cent.) were due to valvular disease, 30 (25 per cent.) to myocarditis, 29 (24 per cent.) to myocardial degeneration, 3 to coronary disease, and 5 to angina pectoris.

With an increasing proportion of elderly people in the population, the number of deaths attributed to myocardial disease is not likely to decline, but there are possibilities for the reduction of valvular heart disease, much of which arises in connection with rheumatism (acute and subacute) and the infective diseases. The following table gives some more particulars about these heart disease deaths:—

	Total Deaths.	Sex.	At all Ages.	0—4.	5—14	15—24	25—44	45—64	65—74	Over 75 yrs.
Valvular Disease	52	{ M	27	—	3	1	1	8	11	3
		{ F	25	—	1	—	7	7	9	1
Myocarditis	30	{ M	8	—	—	—	—	2	2	4
		{ F	22	—	—	—	3	4	7	8
Myocardial Degeneration	29	{ M	14	—	—	—	2	5	3	4
		{ F	15	—	—	—	—	3	6	6
Coronary Disease	3	{ M	3	—	—	—	—	2	1	—
		{ F	—	—	—	—	—	—	—	—
Angina Pectoris	5	{ M	4	—	—	—	—	3	1	—
		{ F	1	—	—	—	—	1	—	—
Totals	119	{ M	56	—	3	1	3	20	18	11
		{ F	63	—	1	—	10	15	22	15
Grand Totals			119	—	4	1	13	35	40	26

There was an increase in the number of deaths from Cerebral Hæmorrhage, and a corresponding decrease in the number of deaths from Circulatory Diseases (other than Heart Disease), which include Arterio-sclerosis. As Cerebral Hæmorrhage is generally due to Arterio-sclerosis, we may take it that the differences shown are due to variations in

certification, and that in fact there has been little alteration in the mortality from each of these classes of diseases, or rather, from the one basic disease, namely, Arterio-sclerosis.

It is gratifying to report a decline in the Cancer mortality as compared with 1933, although there has been little alteration as compared with the previous ten years. I will deal specially with the subject of Cancer later in this Report.

There has been a gratifying reduction in the mortality from Bronchitis and Pneumonia, probably due to some extent to the more favourable weather conditions prevailing during the year.

The total mortality from Tuberculosis remains the same as that of 1933, but well under the average for the preceding ten years. As a matter of fact, there was an increase in the number of deaths from Pulmonary Tuberculosis, and a corresponding decrease from Non-pulmonary disease. There is, however, no reason to alter the opinion which I have expressed in previous reports, namely, that we may reasonably expect the incidence and mortality from Tuberculosis to continue to decline.

The infantile mortality is gratifyingly low, and the rate (54 per 1,000 live births) is the lowest on record for the City. Thirty years ago, I expressed the hope that we might reduce the infantile mortality to 100 per 1,000 births, and ten years ago, that we might reduce it to 50. The latter hope was nearly achieved in 1934. The most interesting feature of the reduced infantile mortality is that it has occurred almost wholly in that part known as the neonatal mortality, or mortality during the first month of life. Although the infantile mortality has been almost continuously falling during the last thirty years, the neonatal part of it has remained relatively high. In 1934, there were 23 neonatal deaths, as compared with 41 in 1933. It will also be noted that the number of deaths of children under 2 years of age from Diarrhoea and Enteritis was comparatively low, and for the first time, this rate did not exceed that of England and Wales.



In view of the variability of the annual Ward rates, the following average rates of infantile mortality for the ten years 1925-34 may be of interest:—

South Westgate	111	Kirkgate	... 82	Alverthorpe	... 61
Primrose Hill...	94	Calder	... 75	Belle Vue	... 59
Eastmoor	... 91	St. John's	... 72	North Westgate	58
Northgate	... 82	Sandal	... 64		

With regard to maternal mortality, I cannot, unfortunately, report any improvement on the high rates which have prevailed during the last few years. There were 10 maternal deaths during 1934, giving a maternal death rate of 10.5 per 1,000 births, which is certainly the highest rate during the last thirty years. Three of these deaths, two due to Septicæmia and one to Shock, followed abortions. The other seven deaths were due to Septicæmia (2), Uræmia (2), Hæmorrhage from Placenta Prævia, Pulmonary Embolism, and Eclampsia. The subject of maternal mortality is specially considered in the Maternity and Child Welfare section of this Report.

### MORTALITY FROM CANCER.

As used here, the term "Cancer" covers all forms of malignant tumours and includes carcinoma, endothelioma and sarcoma. Essentially, a malignant tumour arises from a cell or group of cells situated in some tissue of the body acquiring the property of rapid and abnormal multiplication resulting in a tumour or growth which infiltrates the surrounding tissues, and which may spread through the lymphatics or blood vessels to neighbouring or distant parts of the body. Every tissue and organ of the body is built up of cells which multiply in a regular and definite way and only to the extent which is required by the normal needs of the body. The cells of Cancer multiply in an irregular way, are subject to no definite limits, and serve no useful purpose. On the contrary, if their course is unchecked, they gradually sap the strength of the body, occasion much pain and suffering, and ultimately lead to the death of their victims.

The essential cause of Cancer still remains a mystery. An old theory, which to my mind has not yet been disproved, postulates the occasional retention or inclusion of



groups of embryonic cells in certain tissues of the body, which, after lying dormant for a time, suddenly become active and multiply rapidly. But even so, we do not know what agency arouses these cells to abnormal activity and perverted growth, and the solution of this problem is the objective of the considerable and intensive research work which is being carried out at the present time. We do know, however, that long-continued local irritation is associated with the development of cancers on the surface of the body, and that prolonged contact with certain substances such as tar, pitch, and petroleum has a close association. The suggestion that cancer is due to a microbe or virus has not been proved, and there is no evidence that the disease is contagious. It does not appear to be hereditary. The disease mainly attacks persons in middle and later life, and although carcinoma is not unknown at earlier ages, malignant disease amongst the young is usually of the sarcoma variety. As regards sex, although the incidence of cancer used to be higher amongst females, it has, during the last few years, turned to the disadvantage of the male. Race, social circumstances, diet, and state of nutrition all appear to have little or no influence on the incidence of cancer.

Certain parts of the body are more likely to be affected than others, particularly the alimentary tract and the generative organs. In men, 64 per cent. of the cancers affect the alimentary tract from the lips to the anus, and in women, 40 per cent. affect the generative system, including the breast, and 40 per cent. the alimentary tract.

### **Increase in Cancer Mortality.**

One of the most disquieting features of our mortality statistics has been the steady increase in the death rate from cancer. In England and Wales, the death rate from cancer has increased from 274 deaths per million in 1847-50 to 999 in 1932. This latter figure is the highest cancer death rate yet recorded for England and Wales.

In Wakefield, the cancer death rate has been practically doubled during the last thirty years. In 1904, it was 0.76 per 1,000 and in 1933 it was 1.61. The average death rate for the decennium 1904-13 was 0.91 per 1,000, for the decennium 1914-1923, 1.26 per 1,000, and for the decennium 1924-1933, 1.42 per 1,000. In 1934, it was 1.41 per 1,000, or when standardised, 1.52.

The increase can, at any rate partly, be explained by the more complete diagnosis of cancer, and by the steady increase of that proportion of the population which is particularly liable to be attacked by cancer. In a small way, too, it can be explained by the increased industrial use of those substances, such as tar pitch and petroleum, which bear some causal relationship to cancer. But when consideration has been given to all these factors, we are bound to admit that there remains a real increase in cancer. Whilst cancer as a whole has increased, and of course with an increase of cancer of certain sites, there has been a decrease of cancer of other sites. The most striking decrease has been that of cancer of the uterus (womb), which has fallen by 21 per cent. between 1911-1920 and 1932. On the other hand, the death rate from cancer of the lungs in males was more than five times as great in 1932 as in 1901-1910, and more than twice as great in females.

“Whilst the magnitude of the increase in both sexes suggests that improved means of diagnosis is partly responsible, the much greater increase for males than females requires some other explanation.” (Registrar-General, Statistical Review, 1932).

### **Cancer Mortality in Wakefield in 1934.**

During 1934, there were 81 deaths (40 males and 41 females) from malignant tumours, forming 12 per cent. of the total mortality. With one exception (a sarcoma of the spine), all were described as carcinomata.

The deaths occurred in the following age periods:—

Age Period.				Total.	Males.	Females.
Under 25 years ...	...	...	...	—	—	—
25—44	„	...	...	10	3	7
45—64	„	...	...	37	18	19
65—74	„	...	...	25	15	10
75 years and over	...	...	...	9	4	5
At all ages	...	...	...	81	40	41

Cancer of the alimentary tract amounted to 60 per cent. of all the cancers, but with a wide difference between the sexes. In the males, cancer of the alimentary tract was as much as 78 per cent. of all cancers, but in the females it was only 44 per cent. Cancer of the generative organs, including the breast, constituted 54 per cent. of the female cancers, but only 9 per cent. of the male cancers. There was one death from cancer of the lung and one from cancer of the larynx.

### Occupations of Males.

General Labourers	...	7	Professional and Clerical	5	
Coal Miners	...	6	Railwaymen	...	4
Tradesmen, Shopkeepers,			Foundry Workers,		
etc.	...	6	Engineers	...	3
Textile Workers	...	5	Others	...	4

### Occupations of Females.

#### (1) Married Women: 35.

Wives of Tradesmen			Wives of General		
(Masters)	...	6	Labourers	...	4
„ „ Railwaymen	...	5	Coal Miners	...	4
„ „ Foundry Workers			„ „ Trade and Shop		
and Engineers	5		Employees	...	2
„ „ Professional and			„ „ Textile Workers	2	
Clerical Men	4		„ „ Others	...	3

#### (2) Unmarried Women: 6.

No Occupation	...	4	Teacher	...	1
Governess	...	1			

### The Role of the Sanitary Authority in connection with Cancer.

The foregoing facts about the scourge of Cancer certainly demand serious consideration from any Authority concerned with the prevention of disease and the improvement of the public health. We know that Cancer is one of the great killing diseases, and we know that it takes an increasing toll of human lives and human happiness year by year. Is it within the power of a Local Authority to do anything to mitigate the ravages of this serious disease? Certainly, the obvious scope of direct preventive work is limited and can only operate in a few trade processes which



have been proved to have a causal relation to Cancer, or in advising people as to the dangers of prolonged local irritation, as from jagged teeth, badly fitting dentures, or even the smoking of a clay pipe. But until we know the real cause of the disease we can do little in the way of real prevention. There are, however, possibilities of what one may call second class preventive work, namely, in efforts to educate the public as to the importance of early diagnosis and treatment, and in seeing that the most efficient methods of treatment are available for all who need it.

We are told by surgeons that many forms of cancer are not so hopeless as they are generally supposed to be, provided they are recognised in an early stage and treated promptly and adequately. Unfortunately, a large proportion of cancer patients do not seek medical advice until the disease is too advanced to be amenable to any form of treatment. This is even the case in superficial tumours, where even a small tumour growth can hardly escape observation. On the other hand, it is by no means easy to diagnose internal cancers in their early stages, although there are certain signs and symptoms which should arouse suspicion, and the surgeon has now at his command greatly improved methods of diagnosis, particularly that of the X-Rays. Unfortunately, one might almost say, cancer, although the cause of much pain in its later, is usually painless in its earlier stages, and the value of pain as a warning signal is lost.

The relationship of early treatment to recovery may be illustrated by the following reports.

An investigation was carried out at Leeds in 1926 with regard to the result of operations carried out at the Leeds General Infirmary, and the Hospital for Women and Children, for Cancer of the Breast, which by the way is a form of the disease which is easily diagnosed in the early stages.

There were 357 cases, and they were divided into three classes (early, moderately advanced, and advanced). At the end of five years, 85 per cent. of the early cases, 18.5 per cent. of the moderately advanced, and 13.5 per cent. of the advanced cases were alive. At the end of ten years,



71.4 per cent. of Class I., 5.2 per cent. of Class II., and 5.6 per cent. of Class III. were alive. Indeed it may be fairly claimed now that in an early case of breast cancer, treated by the modern complete operation, the chances are that about 90 per cent. of the patients will recover and remain well so far as that particular cancer is concerned. Cancer of the lip is likewise easy to recognise and easy to remove, so long as it has remained localised. Even in Cancer of the tongue, although a less favourable variety, it is claimed that about 50 per cent. can be cured, if the conditions are favourable as regards situation and earliness of removal. The modern use of radium, either alone or in combination with surgical treatment, has proved a great advance in cancer therapy, not only as a curative agency, but for the amelioration of advanced and deep cancers and relief from pain.

The great hope, then, is early treatment, which means that all possible sufferers will go to a doctor at the earliest indication of anything wrong. It is, therefore, necessary to instruct the people as to these indications.

In Wakefield, we have tried to do something on these lines by the distribution of circulars, and periodic notices in the local health journal, "Better Health," by talks at Centres, and during Health Weeks. A few years ago—in 1927—the Yorkshire Council of the British Empire Cancer Campaign organised in Wakefield a week's intensive educational campaign, with lectures and an exhibition, all with the object of impressing people with the importance of noting the early signs of cancer and immediately seeking medical advice. So far as I can gather from my surgical friends, all this propaganda has had little or no effect in sending cancer patients earlier to their doctors, and the proportion of advanced cases admitted to the Hospital does not grow less. For one thing, I feel that much of our propaganda work does not reach the class who are most affected, namely, the middle-aged and the elderly. Then we have to remember the reluctance of many people to seek medical advice for something which they fear may be cancer, but shrink from the ordeal of being told authoritatively that it is cancer. To them, ignorance is a kind of qualified bliss. There was a time when a similar mental attitude to tuberculosis was quite common, but which has

to a large extent been removed by education and experience. It is now realised that tuberculosis is not the inevitably fatal malady it was once supposed to be, and, as a rule patients are eager to secure the treatment which may possibly bring about a cure. And now, we want to encourage a similar mental attitude with regard to cancer, even though we cannot offer quite the same amount of reward.

It appears to me that some further action by local authorities is urgently needed, although there may be differences of opinion as to the best line to take. Some five years ago (July, 1930) the Ministry of Health, being of the same opinion, issued a Circular (Number 1136) to the Councils of Counties and County Boroughs, accompanied by a "Memorandum on Cancer as a subject for the attention of Local Authorities." This Memorandum explains the situation so clearly that I think it well worth repeating here:—

(MINISTRY OF HEALTH CIRCULAR 1136, dated 31st July, 1930, part of).

### **Memorandum on Cancer as a subject for the Attention of Local Authorities**

#### *INTRODUCTORY.*

For some years past the high and apparently increasing mortality rate due to the group of diseases, generally classified for purposes of death registration under the name cancer, or malignant disease, has been receiving the consideration of the Departmental Committee.

A series of investigations has been carried out at the instance of the Committee, and technical reports (Appendix I) have been published which surveyed certain aspects of the problem in a way not hitherto attempted. The work done was designed not to duplicate, but to supplement, that which is being carried out by other organisations such as research bodies, hospitals, etc.

It soon became clear that the value of such investigations would be greatly enhanced by information derived from inquiries among patients, and sometimes their relatives, in their own homes, and such information is best

obtained by the public health departments of local authorities. A Sub-Committee was accordingly appointed consisting of the Medical Officers of Health of some of the largest County Boroughs in England and Wales which seemed the most suitable areas for the purpose of such experiments. The members of this Sub-Committee volunteered to carry out, in so far as their respective facilities allowed, co-ordinated inquiries into certain medical aspects of the problem, and the additions to knowledge so secured have been invaluable, not only to the health departments of the cities co-operating, but also to the central department and to medical science in general. And they encourage the belief that there are useful lines of action open to a public health authority which is anxious to play its part in the reduction of mortality and relief of suffering due to malignant disease.

## I.—FIELDS OF INVESTIGATION OPEN TO LOCAL AUTHORITIES.

(a) In so far as reduction of mortality is concerned one sign-post stands out clearly. The curability of the disease, for those organs hitherto investigated by the Committee, depends to a very important degree upon the earliness with which it is detected and treated, but under present conditions a high proportion of patients do not present themselves for treatment until the opportunity of permanent relief has passed.

In many instances no doubt some of the delay which occurs before appropriate treatment is applied is not attributable to the patient. Some forms of cancer give rise to so few symptoms as to render them very difficult to recognise during the "curable" stage, and here the chief prospect of good lies in securing improvement of the facilities for diagnosis. Some local authorities have already taken tentative steps in this direction by the organization of specialized services.

In other cases, however, especially in such organs as the breast, uterus, mouth, skin, and rectum, an abnormality usually gives rise to some obvious sign or symptom readily noticeable by the patient. In such cases the reasons for delay, which may be physiological, psychical, economic, or social, offer a wide field for inquiry. More accurate



appreciation of the factors influencing patients in this respect may be expected to bring to light ways in which this fatal delay can be reduced or eliminated. Investigations necessary to elucidate the subject, and the action necessary for its remedy, are matters falling naturally within the province of local authorities where progress would be expedited by their co-operation.

(b) The other side of the problem from the standpoint of local authorities is the relief of suffering for those who, for various reasons such as delay in obtaining treatment, recurrence after treatment, and, in some instances, inherent malignancy of the disease, have reached a stage beyond the possibility of cure. The home conditions of the patients in regard to treatment and nursing, the desirability either for themselves, or for the sake of their relatives, or both, of admission to hospital, the sufficiency or otherwise of hospital accommodation, the means for palliative treatment and similar matters, call for investigation and such remedy as may be necessary and practicable.

## II.—RECENT PUBLIC HEALTH PROVISIONS.

There are two recent provisions relating to the public health, one statutory, the other the result of public subscription aided by a State Grant, viz.: the Local Government Act, 1929, and the formation of the National Radium Trust and Commission, each of which has a bearing on the present subject.

Under the Local Government Act, 1929, County and County Borough Councils have become responsible for the administration of many of the Hospitals in which a large proportion of cancer patients are treated.

In the past the majority of these patients belonged to that group in which relief of suffering was perhaps the most that could be accomplished. During recent years, however, a larger proportion of earlier cases has been treated in the more modern Poor Law Hospitals, and it is reasonable to suppose that this practice will grow as these hospitals develop as general hospitals. From this standpoint alone it is clearly desirable for local authorities to be as well informed as possible about the position of cancer cases in their areas. The diagnosis and treatment of cancer is

tending to become so highly specialised that co-operation between the different hospital services of an area, by improvement of facilities for diagnosis, by classification and transfer of patients, by provision of specialised treatment, and otherwise, becomes necessary in order to avoid duplication of expensive services and to make a more concerted attack on the subject than has hitherto been possible. As an example, the wider provision of radium treatment under the national scheme of radium distribution may be instanced. Although the reasons are too numerous to set out here it may be accepted as axiomatic that the best use of a limited amount of radium can be secured only by some form of centralisation. In this connection it may be noted that the Radium Commission, in its duty of distributing the Radium purchased by the National Radium Trust out of the National Radium Fund, has encouraged the formation of national radium centres at which suitable and properly accredited patients from any source needing radium treatment may obtain it.

These various considerations suggest the need for extended local inquiries into the cancer problem, and a beginning has already been made, thanks to the public-spirited efforts of a number of local authorities and their medical officers of health. By their extension we may hope gradually to increase our knowledge from the public health aspect, side by side with the advances taking place in regard to causation, treatment, and prevention. One of the objects of the Local Government Act, 1929, is to provide a means for linking up the treatment of declared disease with the other efforts of public health authorities in regard to prevention, reduction of mortality, etc., and useful steps in that direction can apparently now be taken where cancer is concerned.

### III.—SUGGESTED METHODS OF INVESTIGATION.

Put broadly, the aim would be to ascertain whether, and if so, in what ways, the environmental, economic, social, or other conditions of cancer patients affect their chances of cure or of relief from suffering, and generally to survey the local means for controlling the disease.

The first step would be for the local authority to devise means for establishing contact with the patients. In the first instance no doubt the field of inquiry will be limited

to patients seeking treatment at the hospitals in the area. It is assumed that for hospitals administered by County and County Borough Councils this will give rise to no difficulty. In the case of voluntary hospitals, the friendly co-operation between their medical staffs and those of the local authorities in the cancer investigations of recent years has shown that difficulty need not be anticipated.

The information to be obtained from individual patients may vary in nature in different areas, and the methods of collection of the data will certainly vary. A series of questions is contained in Appendix II, and although it is not suggested that this "questionnaire" will prove suitable for the purposes of all local authorities desirous of attacking the problem, it is intended to indicate the general lines upon which the earlier investigations at all events might proceed. It may be pointed out that the series of questions has been so designed as not necessarily to make any serious demand on the time and energy of the medical staffs of hospitals.

It may also be mentioned that all the essential information can be obtained through suitable non-medical members of the staff of the health department, working under fairly close supervision by a medical officer, and that the actual number of histories to be collected in any one area will probably not be very large if the work relates in the earlier stages to hospital patients only.

In Section I of Appendix II questions regarding methods of ascertainment have been introduced because some local authorities have already instituted cancer diagnostic clinics, while others are giving trial to methods of voluntary notification of cancer.

Section II is concerned with the history of the patient before ascertainment, and is the one which seems likely to produce useful information in regard to delay in obtaining early treatment. The number of questions in the section is small, but some of them represent the summarization of a series of questions to be put by the investigator to the patient.



Sections I and II would as a rule be completed during the interval, usually short, elapsing between the definite or tentative diagnosis of cancer and the beginning of treatment. During this period the patient may either be in hospital or at home awaiting admission, and an arrangement would be necessary by which the hospital authority would inform the local authority of the existence of the case.

Section III would normally be completed at the time the patient was discharged from hospital, and here again some intimation to the local authority that the patient was about to be discharged would be necessary. Information regarding treatment need be of the simplest possible character compatible with a due understanding of the case, and the questions have been framed with this in view.

Section IV. is divided into two parts depending on whether an attempt to eradicate the disease was practicable or not. Here there is some risk of overlap as between the work of the public health department and that of the "follow-up" system of voluntary hospitals which, it may be anticipated, as a consequence of the increased facilities for radium treatment, will be developed on a wider scale than hitherto. The aim of the health department's investigator should be to assist by co-operation with hospital staffs rather than to duplicate visits. In those instances where the hospital does not undertake visits to patients' homes, the investigator can perform a very necessary function in securing, by advice and encouragement, regularity of attendance at hospital.

#### IV.—APPROPRIATE ACTION.

It seems probable that, by means of personal contact between their officers and the patients and by analyzing a collected sample of individual histories, local authorities may find it possible to improve the lot of cancer patients in their areas, and the action taken may be both (*a*) individual, and (*b*) collective.

(*a*) The former includes the advice and help which the visiting officer of the health department may be able, with the concurrence of the medical attendant, to tender to patients or their relatives, upon such subjects as regularity of attendance at hospital, the need of obtaining advice or further advice, the

desirability of attendance at hospital or other institution, nursing arrangements, arrangements in the home, use of drugs, dressings, etc., in the manner prescribed, and similar matters. Help of this nature depends upon the conditions ascertained for each individual case and is immediate, but is limited by existing provisions as to hospital, nursing and other facilities.

(b) By collective action is meant the augmentation of existing, or the provision of new, public facilities for dealing with the disease, if any shortcomings are brought to light through the analysis of material collected in the investigation of a sufficient sample of cases. Obvious examples are education of the public, improved facilities for diagnosis or treatment (particularly radium treatment), for transport, for "following-up" and recording of cases, etc.

## V.—CO-OPERATION WITH OTHER AUTHORITIES.

Investigation and action of the kind here suggested provide wide opportunities for co-operation between local authorities and other health services, particularly hospitals, whether voluntary or public, other voluntary organisations and general practitioners. The "collective investigation into the incidence of cancer and its history after treatment" initiated by the British Medical Association may be instanced. The two investigations differ widely in their objects, scope and duration, but if they are pursued at the same time in the same area, their dovetailing should present no difficulty, and may be an advantage to both. The "collective investigation" relates to the physical condition of the patient, is restricted to four organs and is limited to a year; the one suggested in the present memorandum relates to the reactions of the disease upon the patient, his relatives and the community in respect of social, environmental and economic conditions, it embraces all sites in which the disease may occur, and it is intended that it should be continued from year to year. Nevertheless, it is clear that there will be points of contact, since many of the patients whose histories are recorded in the "collective investigation" will seek treatment at a voluntary or public hospital, and so may fall within the scope of the local authority's investigation.

---

The Memorandum was considered by the Health Committee at the time, and I was instructed to carry out the suggestions so far as they might prove practicable. I first of all approached the local general hospital, into which a considerable proportion of the cancer cases would be admitted,



and asked if I could be furnished with the names and addresses of such patients in order that the investigations suggested by the Ministry might be carried out. The Hospital Authority gave the request serious consideration, but ultimately, and I believe reluctantly, came to the conclusion that the information could not be given, because it would involve a breach of professional confidence between the medical staff and the patients. I also found that those medical practitioners with whom I discussed the matter took a similar view. As things are at present, the position taken by the doctors is undoubtedly a right and proper one, but as one doctor said to me, "If cancer was a notifiable disease, our position would be different."

Since that time, I have thought much about the subject, and the result has been a deepening conviction that compulsory notification of cancer is the next step required in a forward policy against the disease. I can quite understand that to many such a step would appear objectionable in its personal and social implications, and futile as to its results. With regard to the former, the personal and social difficulties could be readily overcome by the method of inquiry employed, and by the discretion of the investigator. Obviously, the method of inquiry would have to be something quite different from that employed in investigating a case of ordinary infectious disease. In every case, the inquiry would be made by a medical officer, and in the first place would be made through or by the medical practitioner notifying the case, and I am quite sure that our Wakefield doctors would be glad and willing to give all the help and information they possibly could. If it was found that direct approach to the patient, or the patient's family would be resented, or would cause distress, no such direct inquiry would be made. On the other hand, it would be found, I am sure, that many direct enquiries could be made without upsetting anybody. Certainly so far as hospital patients are concerned, I am certain there would be no trouble or difficulty at all, and the inquiry would be taken as a matter of course. Another possible objection might be that notification would discourage patients from seeking medical advice. I remember the time when the same objection was urged against making tuberculosis a notifiable disease, and I am certain it would prove as ill-founded in the case of cancer as it has in the case of tuberculosis.

Now what useful results could be expected from the notification of cancer and from the investigations made in consequence of notification?



In the first place, it would supply us with very valuable information regarding the history of individual cases, methods of treatment and results of treatment, and all the data collected could be made of real practical use. At the present time, the only information the Medical Officer of Health gets about a cancer case is a copy of the death certificate. Apart from the mortality, he has no knowledge of the prevalence of cancer in his district. He does not know what proportion of cases recover. He knows nothing about the social circumstances of the patients, and consequently he cannot help them in the variety of ways that he can, for example, in a case of tuberculosis. He has no direct means of knowing when cancer patients first consult a doctor, or the reasons why they often delay doing so. Such knowledge might very well prove useful in improving on the methods of health education. He has no direct knowledge as to the sufficiency of hospital accommodation for cancer cases, or of the adequacy of provision of modern methods of treatment, e.g., radium treatment. He would like to know something about the home nursing of such cases, whether there is a sufficient supply of dressings, and so on, because he might be able to help when there was a need. All that information, and much more, would be available as the result of notification.

Lastly, I believe that notification would prove a powerful agency in dispelling the profound ignorance and fatalistic ideas which envelop the subject of cancer. The inquiries made as a result of notification would gradually, even if slowly, have the effect of bringing to the people knowledge about the subject, and, with knowledge, interest and hope. It would not prevent cancer arising, but it would in course of time cause more patients to seek medical aid, at a time when medical aid could help them. So far as I know, Cancer has never been made a notifiable disease, but I believe the time is now ripe for that step.

## GENERAL PROVISION OF HEALTH SERVICES.

**Public Health Officers.**

The following are the officers of the Public Health Department:—

Name.	Qualifications.	Office held.
Thomas Gibson ...	M.D., C.M. (Edin.) D.P.H.	Medical Officer of Health. School Medical Officer. Tuberculosis Officer. Medical Officer for Maternity Hospital and Child Welfare Centres. Medical Superintendent of the Fever Hospital. Medical Officer under the Mental Deficiency Act. Police Surgeon.
Frank Allardice ...	M.D., Ch.B., D.P.H. (Edin.)	Deputy Medical Officer of Health. Assistant School Medical Officer and School Ophthalmologist. Deputy Tuberculosis Officer Deputy Police Surgeon.
Jessie Eeles ...	M.D., Ch.B. (Edin.) ...	Assistant Medical Officer. Assistant Medical Officer for Maternity and Child Welfare. Assistant School Medical Officer.
Thomas Ross ...	M.B., Ch.B. (Glas.) ... D.P.H.	Junior Assistant Medical Officer. Assistant School Medical Officer. Assistant Medical Officer for Maternity and Child Welfare.
J. W. Thomson ...	M.B., C.M. (Aberdeen) ...	Consulting Obstetric Surgeon (Part time).
T. M. Edward ...	M.B., Ch.B. (Edin.) ...	Medical Officer for Venereal Diseases (Part- time) (Temp.).
H. L. Crockatt ...	M.B., Ch.B. (Leeds) ...	Consulting Orthopædic Surgeon (Part time).
William Roberts...	Certificates of Royal Sanitary Institute for (1) Inspector of Nuisances and (2) Inspector of Meat and other Foods ...	Senior Sanitary Inspector. Inspector of Meat and other Foods. Inspector under the Hous- ing Regulations. Inspector of Canal Boats.

Name.	Qualifications.	Office held.
William V. Hargreave ...	Certificates of Royal Sanitary Institute for (1) Sanitary Inspectors. (2) Inspector of Meat and other Foods ... (3) Sanitary Science ...	Deputy Senior Sanitary Inspector. District Sanitary Inspector. Inspector of Meat and Other Foods. Inspector under the Housing Regulations.
William Dawson ...	Certificates of Royal Sanitary Institute for (1) Sanitary Inspectors. (2) Inspector of Meat and other Foods ... (3) Smoke Inspection ... Certificate of the Company of Plumbers ...	District Sanitary Inspector. Inspector of Meat and Other Foods. Inspector under the Housing Regulations.
John P. Whitehead	Certificate of Royal Sanitary Institute for (1) Sanitary Inspectors, and (2) Inspector of Meat and other Foods ...	Ditto.
Clifford A. Murray	Certificate of Royal Sanitary Institute for (1) Sanitary Inspectors. (2) Inspector of Meat and Other Foods ...	Ditto.
Sarah S. Thorp ...	Certificate of Royal Sanitary Institute for (1) Inspector of Nuisances (2) Maternity and Child Welfare, and (3) Health Visitor and School Nurse. C.M.B. Certificate ... New Certificate of Royal Sanitary Institute for Health Visitors ...	Senior Health Visitor. Superintendent, Belle Vue Child Welfare Centre. School Nurse. Tuberculosis Nurse.
Hilda Staniforth	Trained Nurse ... C.M.B. Certificate ... Certificate of Royal Sanitary Institute for (1) Inspector of Nuisances (2) Health Visitor, and (3) School Nurse ... New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. School Nurse. Tuberculosis Nurse. Superintendent, Eastmoor District Child Welfare Centre (held at Principal Centre).



Name.	Qualifications.	Office held.
Hilda Robertshaw.	Trained Nurse. ... C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. School Nurse. Tuberculosis Nurse. Superintendent, Thornes Lane District Child Welfare Centre (held at Principal Centre).
Maggie Dearden ...	Trained Nurse ... C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. School Nurse. Tuberculosis Nurse. Superintendent, Snape- thorpe Hall Child Welfare Centre.
Jennett Gardner...	Trained Nurse ... C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. School Nurse. Tuberculosis Nurse. Superintendent, South Westgate District Child Welfare Centre (held at the Principal Centre).
Hannah Bell	Trained Nurse ... C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. School Nurse. Tuberculosis Nurse. Superintendent Northgate District Child Welfare Centre (held at Principal Centre).
Olive I. Burton ...	Trained Nurse ... Certificates of Chartered Society of Massage and Medical Gymnastics for (1) Massage, and (2) Swedish Remedial Exercises.	Orthopædic and Ultra- Violet Ray Clinic Nurse. Nurse at Principal Child Welfare Centre.
A. J. Peck ...	Trained Fever Nurse ...	Matron of City Fever Hospital.
Kate P. Perkins...	Trained Nurse ... C.M.B. Certificate.	Matron of Maternity Hospital.
Herbert Pollard...	M.R.C.V.S. ...	Veterinary Surgeon.  Veterinary Inspector of Dairy Cows (Part time Officer).
F. W. Richardson.	F.I.C. ...	Analyst of Food, Drugs, and Fertilizers (Part- time Officer).

The Clerical Staff consists of:—

**General.**

William V. Morris, Chief Clerk and Vaccination Officer.  
 Ronald Shaw.  
 Edward Land.  
 Harold Nield.

**Maternity and Child Welfare.**

Beatrice Lake (Part-time School Medical Service).  
 Mary T. Kelly, Clerk and Assistant at the Principal  
 Child Welfare Centre.

**School Medical Service.**

Herbert W. Tate.

**Sanitary Inspector's Office.**

Herbert H. Johnson, C.R.S.I., Clerk and Assistant  
 Sanitary Inspector.

**Midwifery Service.**

The Corporation employ two salaried District Midwives :—  
 Miss E. M. Storey and Mrs. E. Illingworth.

**Changes in Staff During the Year.**

A new Junior Assistant Medical Officer (Dr. T. Ross) was appointed by the Corporation, and commenced duties on 1st November, 1934.

Miss E. W. Farrar, Health Visitor and School Nurse, left the service of the Corporation on 31st October, in order to be married. Her place was filled by the appointment of Miss H. Bell, who commenced duties on 7th November.

Dr. A. W. Frew, who acted as Medical Officer for Venereal Diseases at the Clayton Hospital V.D. Clinic, died in May. A permanent appointment has not yet been made by the West Riding County Council, but Dr. T. M. Edward is now acting as temporary Venereal Diseases Medical Officer.

Mr. G. O. Allen, Clerk and Assistant Sanitary Inspector, left the Corporation's service in April, in order to take up another appointment. Mr. Herbert H. Johnson was appointed in his place.

## **Reorganisation of Staff.**

During the year, the Corporation decided to appoint an additional Assistant Medical Officer, and appointed Dr. Thomas Ross to this post. Dr. Ross commenced his duties on 1st November, 1934. This new appointment enabled us to carry out a much-needed reorganisation of the duties of the medical staff. It enabled Dr. Jessie Eeles to be relieved of her School Medical Inspection work (except the inspection of girls at Thornes House Scondary School) and to devote her whole time to Maternity and Child Welfare Work. It also enabled Dr. Allardice, the Deputy Medical Officer of Health, to take over the general supervision of the School Medical Service, and in addition to the Ophthalmic Clinic, to take on the work of the ordinary and special School Clinics, as well as all the work connected with Mental Deficiency, both as regards school children and cases coming under the Mental Deficiency Acts. He also was appointed Deputy Police Surgeon, and generally required to do the police medical work. He was also appointed Deputy Tuberculosis Officer. Along with Dr. Ross, he also carries out the work at the Anti-Diphtheria Immunisation Clinics. Dr. Ross now carries out all the routine medical inspection work, attends two Child Welfare Centres, attends the Immunisation Clinic, administers anæsthetics at the Dental Clinic and the Maternity Hospital, and takes special clinics or other duties when required.

The Medical Officer of Health himself, whilst carrying out the general administrative supervision of the Public Health Department, continues to act personally as Medical Superintendent of the Municipal Hospital and as Tuberculosis Officer. Much of his time is now taken up with the work connected with the clearance of insanitary areas.

## **Professional Nursing in the Home.**

### **(a) General.**

This is chiefly provided by the local Nursing Association, which employs six Nurses. The Corporation has an arrangement with the Association for the home nursing of cases of puerperal pyrexia when required.

### **(b) Infectious Diseases.**

The Health Visitors render assistance in the home nursing of cases of Measles, Whooping Cough, Ophthalmia Neonatorum, etc.



### **Midwives.**

During 1934, 22 midwives gave notice of intention to practise, including 5 at the Maternity Hospital, 4 at the County Hospital, and 2 at a Private Maternity Home.

### **Laboratory Facilities.**

By arrangement with the West Riding County Council, the Wakefield Corporation is provided with facilities for pathological examinations at the County Hall Laboratory. These arrangements include the bacteriological examination of water, milk, and pathological specimens. Chemical and bacteriological examinations of the Wakefield Corporation water supply are made in the Laboratory of the West Riding Rivers Board. The Chemical analysis of food, drugs, and fertilisers is carried out by Mr. F. W. Richardson, F.I.C., of Bradford.

### **Legislation in Force.**

There have been no changes or additions to the general and local public health legislation in force in the City, a summary of which appeared in my Annual Report for 1931.

### **Maternity and Nursing Homes.**

There was one Maternity Home and one Nursing Home on the Register at the end of the year. No new licences were issued during the year 1934.

### **Maternal Mortality.**

Investigations are made into all maternal deaths and cases of puerperal fever and pyrexia by Dr. Jessie Eeles, Medical Officer for Maternity and Child Welfare. Special reports on maternal deaths are sent to the Ministry of Health Committee on Maternal Mortality.

### **Ambulance Facilities.**

(1) For infectious cases, 2 motor ambulances are provided by the Corporation at the Municipal Hospital for Infectious Diseases. By arrangement with the Corporation, the Smallpox Motor Ambulance, belonging to the Wakefield and District Smallpox Hospital Committee, is garaged at the Municipal Hospital, and is worked by the Corporation driver.

(2) For non-infectious and accident cases, 2 Motor Ambulances are provided at the Police Station.

## CLINICS AND TREATMENT CENTRES.

The full list of Clinics and Treatment Centres, given in my Annual Report for 1931, still stands good, except that the Monday afternoon session of the Tuberculosis Dispensary has been discontinued. An additional session (Thursday mornings) of the Ante-Natal Clinic was commenced during the year, making a total of three sessions per week for this Clinic.

The work of the Anti-Diphtheria Immunisation Clinic, which was first commenced in February, 1932, continued throughout the year. The Clinic is held at the Principal Child Welfare Centre, Margaret Street, each Friday afternoon. During the latter part of the year, owing to the large number of applications received in response to an appeal to parents to have their children immunised, it was necessary to hold 5 additional sessions of the Clinic each week.

## LOCAL GOVERNMENT ACT, 1929.

The arrangements made under the above Act were described in my Annual Report for 1931, and no changes have taken place during the year.

## POOR LAW MEDICAL OUT-RELIEF.

Dr. S. Reader, who was District Medical Officer for the No. 2 Medical Relief District, resigned his position on 4th October; on his leaving the City. The City Council subsequently altered the boundaries of the Nos. 1 and 2 Medical Relief Districts by the transference of the Calder Municipal Ward from No. 2 to No. 1 District. The Council also appointed Dr. J. J. Reynolds as temporary Medical Officer for the revised No. 2 District.

## HOSPITALS.

The only changes during the year are as follows :—

The building of the new Municipal Hospital for Infectious Diseases at Snapethorpe was completed during the year, and it was actually opened for use on 5th September, 1934.

The building of the new Maternity Hospital at Manygates Park was continued during the year, and it is hoped that the work will be completed about the middle of 1935.

## SANITARY CIRCUMSTANCES OF THE AREA.

**Water Supply.**

I am obliged to Mr. A. G. Beaumont, the Waterworks Engineer, for the following information:—

“Notwithstanding the drought which began in November, 1932, the full supply was maintained without restrictions. As the reservoirs were becoming low at the beginning of March, preparations were made for pumping water from the Ryburn Compensation Reservoir to augment the supply. Chemical and bacteriological analyses showed the quality was satisfactory, and the catchment area was inspected by the Medical Officer and the Waterworks Engineer. The drainage of houses and farms in the neighbourhood of the Reservoir, which was already in hand, was expedited, five cottages which could not be drained were evacuated, and by arrangement with the local authority, the sewer was extended so as to deal with the remaining properties adjacent to the Rochdale Road. Pumps were installed and used for a few weeks, until rain improved the situation.

“At the Ardsley Reservoir, further repairs were made to the bye-channel which had been damaged by coal mining. A length near the outfall end had been deepened and reconstructed in 1933, and the embankment raised in order to avoid the risk of water from adjacent cultivated lands ponding up and flowing into the reservoir. The work was designed with a view to future settlement. (Note: If this work had not been carried out, it is fairly certain that a considerable quantity of water would have overflowed into the Reservoir during the storm on Easter Tuesday, 1935).

“As a further precaution against contingencies and the use of emergency supplies, new sterilising plant was installed at the filtration works. The Waterworks Department continued their practice of having full chemical and bacteriological analyses made each month of the water as supplied to the town and district, and tests were made quarterly at each stage of filtration and treatment. The reports showed that the water supplied had a high degree of purity, and was free from harmful bacteria and from action on lead pipes.”



## **Drainage, Sewerage, and Sewage Treatment.**

(I am obliged for the information given under this heading, and also under that of "Public Cleansing," to Mr. L. Ives, the City Surveyor).

No extensions of any magnitude to the sewerage system have been carried out during the last financial year.

The extensions to the Calder Vale Sewage Disposal Works are nearing completion. A loan was obtained with the sanction of the Ministry of Health, the estimated cost of the scheme being £55,000.

The works comprise three new Bio-Aeration Units, complete with two Paddle Power Houses and equipment, 12 pyramidal Sludge Separating Tanks, and combined Effluent and Return Sludge Pumping Station. The effluent from the Bio-Aeration Tank will be pumped on to the existing Percolating Filter, which is being remodelled and provided with 26 Revolving Distributors. The Scheme also provides for additional 1st Lift Pumping Plant, improvements to the existing Precipitation Tanks, etc.

## **Public Cleansing.**

(a) Method of Collecting dry house refuse.

The contents of the house bins are emptied into galvanized iron skips, and the refuse deposited into carts provided with canvas covers, also motor refuse collecting vehicles, fitted with roller canvas covers.

(b) Method of collecting refuse from earth closets and privies.

Earth closets and privies (of which there are now very few) are emptied at night. The tubs are taken away complete and returned in a special wagon with wooden doors. The contents of privies are loaded into a covered motor vehicle.

- |   |  |
|---|--|
| (c) Method of disposing of dry house refuse.                                    | Controlled tipping.  |
| (d) The method of disposing of refuse from earth closets and privies.           | Stacked and covered with soil on farm land and afterwards ploughed in.   |
| (e) Method of cleansing cesspools.  | Contents pumped into horse drawn steel sludge tank.  |
| (f) Arrangements for the disposal of cesspool contents.                         | Mostly spread on to grass land, exceptional cases deposited into sewers which immediately afterwards are properly flushed.                           |
| (g) Ashbin maintenance under the Wakefield Corporation Act, 1924 (Section 125). | On the 31st March, 1935, the number of ashbins maintained by the Corporation was 4,982, for which a charge of one shilling per bin per year is made. |

### **Closet Accommodation.**

See Sanitary Inspector's Report.

SANITARY INSPECTION OF THE AREA.  
*By William Roberts, Senior Sanitary Inspector.*

**Notices Served.**

Informal Notices served	...	...	...	...	390
Informal Notices complied with	...	...	...	...	360
Statutory Notices served	...	...	...	...	57
Statutory Notices complied with	...	...	...	...	51
Notices outstanding at end of 1934	...	...	...	...	36
Premises where work has been carried out by					
Verbal Notice or without notice	...	...	...	...	278
Letters sent	...	...	...	...	198
Matters referred to City Surveyor	...	...	...	...	100
Matters referred to Waterworks Engineer	...	...	...	...	20
Complaints received	...	...	...	...	634
Complaints confirmed	...	...	...	...	520
Nuisances found	...	...	...	...	247

SYNOPSIS OF INSPECTION WORK.

Total Number of Inspections made	...	...	12,178
Total Number of Re-inspections made	...	...	2,200

**Dwelling Houses.**

	<i>Inspections. Re-inspections.</i>	
Ordinary	...	...
Infectious Disease	...	...
Housing Consolidated Regula- tions, 1925	...	...
Housing Act, 1930 (Special Surveys, Clearance, etc., Areas)	...	...
	760	270
	625	114
	155	248
	256	958

**Sanitary Conveniences.**

Water Closets	...	...	210	39
Privies and Tub Closets	...	...	51	—
Urinals	...	...	27	—

**Refuse Storage.**

Ashplaces	...	...	136	116
Ashbins	...	...	224	170

**Drains.**

Inspections	...	...	236	75
Smoke Tests	...	...	9	—
Chemical Tests	...	...	14	—



*Inspections. Re-inspections.***Sewers, etc.**

Sewers ... ..	22	7
Street Gullies ... ..	223	44

**Factories and Workshops, etc.**

Factories ... ..	20	2
Workshops (excluding Bake-houses) ... ..	255	11
Workshops (including Restaurant Kitchens, and Stables)	21	4
Bakehouses (Factory) ... ..	90	10*
Bakehouses (Non-Factory) ...	150	8
Outworkers ... ..	1	—

**Miscellaneous.**

Borough Market ... ..	302	—
Butchers' Shops (Stalls, etc.) ...	644	—
Cold Stores ... ..	34	—
Common Lodging-Houses ...	93	—
Canal Boats ... ..	30	—
Cowsheds ... ..	191	—
Cattle Market ... ..	75	—
Dairies, Milk Shops and Milk Stores ... ..	494	—
Dangerous Structures ... ..	13	8
Entertainment Houses ... ..	38	—
Fishmongers' Shops and Stalls	433	—
Houses Let in Lodgings ...	101	38
Ice Cream Premises ... ..	26	—
Meetings with Owners or Tradesmen ... ..	853	—
Miscellaneous (including Cesspools, Water Courses, Refuse Tips, etc.) ... ..	124	3
Offensive Trades (including Fish Fryers) ... ..	336	—
Piggeries ... ..	48	7
Slaughter-houses—Public ...	991	—
Private ... ..	2550	—
Special Notices of Slaughter ...	49	—
Smoke Observations ... ..	92	—
Schools ... ..	32	8
Streets or Back Roads ... ..	31	—
Special Visits ... ..	655	—
Sanitary Inspections ... ..	1207	—

			<i>Inspections.</i>	<i>Re-inspections.</i>
Van Dwellings ...	...	...	15	3
Visits under Rats and Mice				
Destruction Act ...	...	...	60	17
Yards and Courts ...	...	...	193	40

A large amount of time has been taken up in connection with investigations into cases of infectious disease, and it will be seen from the above table that this work involved enquiries being made into the circumstances arising out of 625 cases.

In addition to this, a considerable part of the Inspectors' time has been devoted to making surveys of dwelling-houses included in Clearance Areas. A total of 1,214 houses have been surveyed and the necessary data brought up to date.

## SUMMARY OF SANITARY IMPROVEMENTS CARRIED OUT UNDER PUBLIC HEALTH ACTS, 1875—1925.

### Dwelling Houses.

Cleansed or Limewashed	...	...	...	...	40
Overcrowding Abated	...	...	...	...	25
Lighting Improved	...	...	...	...	3
Ventilation Improved	...	...	...	...	26
Roofs Repaired	...	...	...	...	31
Eaves, Spouts, or Rain Water Fall Pipes					
Repaired	...	...	...	...	71
External Walls, Chimneys, Repaired or Re-pointed					12
Inside Walls, Ceilings, etc., Repaired	...	...	...	...	45
New Floors Laid or Repaired	...	...	...	...	23
Floors Ventilated	...	...	...	...	—
Doors Repaired	...	...	...	...	19
Fireplaces, etc., Repaired	...	...	...	...	29
Water Supply Improved	...	...	...	...	1
Wells Abolished	...	...	...	...	1
Yards Paved	...	...	...	...	24
Yards Cleansed	...	...	...	...	5
Food Stores improved	...	...	...	...	—
Washing Accommodation improved	...	...	...	...	16
Living Vans removed	...	...	...	...	12
Dangerous Structures removed	...	...	...	...	—

### Drains.

Opened out for inspection	...	...	...	...	29
Repaired	...	...	...	...	65
Reconstructed	...	...	...	...	2

Inspection Chambers constructed	...	...	...	12
Drains choked	...	...	...	445
Drains cleansed by Corporation Drain Cleanser	...	...	...	325
Drains cleansed by Owners	...	...	...	120
Drains ventilated	...	...	...	7
Drains removed from inside buildings	...	...	...	2
Drains disconnected from sewer	...	...	...	3
New Drains provided	...	...	...	22
Cesspool repaired	...	...	...	—

### **Accumulations Removed.**

Manure	...	...	...	20
Other	...	...	...	29
Manure Receptacles provided	...	...	...	9

### **Animals, Poultry, etc.**

Nuisance abated	...	...	...	11
-----------------	-----	-----	-----	----

### **Ashbins and Ashplaces.**

Movable galvanised iron ashbins renewed (at shops, stores, etc.)	...	...	...	33
Movable galvanised iron ashbins provided in lieu of ashpits	...	...	...	10
Dry ashplaces abolished	...	...	...	6
Dry ashplaces repaired	...	...	...	13
Intimations sent to City Surveyor (Movable galvanised iron ashbins requiring renewal at 63 dwelling-houses)	...	...	...	30

### **Urinals.**

Urinals cleansed or improved	...	...	...	2
New Urinals provided	...	...	...	—
Repaired	...	...	...	2
Abolished	...	...	...	—

### **Sinks.**

New Sinks provided	...	...	...	51
Sink Waste Pipes trapped	...	...	...	7
Sink Waste Pipes repaired	...	...	...	21
Other Waste Pipes repaired	...	...	...	1

### **Piggeries.**

Swine removed	...	...	...	1
---------------	-----	-----	-----	---

### **Water Closets.**

Cleansed or limewashed	...	...	...	27
Repaired	...	...	...	108
Additional provided	...	...	...	7
Re-constructed	...	...	...	9



## SUMMARY OF SANITARY IMPROVEMENTS CARRIED OUT UNDER HOUSING ACTS.

### Dwelling Houses.

Lighting improved	...	...	...	...	...	18
Ventilation improved	...	...	...	...	...	143
Windows repaired	...	...	...	...	...	34
Roofs repaired	...	...	...	...	...	88
Eaves, Spouts, or Rain Water Fall Pipes repaired						66
External Walls, Chimneys, etc., repaired or repointed	...	...	...	...	...	92
Inside Walls, Ceilings, etc., repaired	...	...	...	...	...	164
New Floors laid or repaired	...	...	...	...	...	149
Fireplaces, Ovens, or Set Pots repaired	...	...	...	...	...	92
Stairways repaired	...	...	...	...	...	15
Doors repaired	...	...	...	...	...	86
Washing accommodation improved	...	...	...	...	...	32
Food Stores provided or improved	...	...	...	...	...	57
Yards paved	...	...	...	...	...	64
Water Supply improved	...	...	...	...	...	—

### Drains.

Opened out	...	...	...	...	...	8
Repaired	...	...	...	...	...	8
Re-constructed	...	...	...	...	...	2
Disconnected from sewer	...	...	...	...	...	1
Rain Water Fall Pipes Disconnected from Drain or Sewer	...	...	...	...	...	4
Removed from Inside Buildings	...	...	...	...	...	—

### Sinks.

New Sinks provided	...	...	...	...	...	26
Sink Waste Pipes trapped	...	...	...	...	...	10
Sink Waste Pipes repaired	...	...	...	...	...	4

### Water Closets.

Additional provided	...	...	...	...	...	—
Repaired	...	...	...	...	...	72

### Ashplaces.

Dry Ashplaces repaired	...	...	...	...	...	13
------------------------	-----	-----	-----	-----	-----	----

### Closet Accommodation.

The closet accommodation in the City is as follows:—

Water Closets (including 329 Trough Closets)	15,718
Privies	33
Tub Closets	14

During the year two privy closets were abolished, the conveniences in question being attached to dwelling-houses that were demolished in consequence of action taken under the Housing Act. The number of Privy and Pail Closets remaining in the City on the 31st December, 1934, is as follows:—

**Privy Closets.**—33 (32 attached to dwelling-houses and 1 used in connection with a workshop).

**Pail Closets.**—14 (7 attached to dwelling-houses and 7 used in connection with workshops).

The closets are situated in the following Municipal Wards: — Alverthorpe (1 Privy Closet), North Westgate (1 Privy Closet), South Westgate (9 Privy Closets and 5 Pail Closets), Primrose Hill (1 Privy Closet and 7 Pail Closets), Calder (2 Pail Closets), Belle Vue (6 Privy Closets), Sandal (15 Privy Closets).

As previously stated, with the exception of 3 Pail Closets attached to Railway properties, the remaining Privy and Pail Closets are situated in districts not provided with sewerage systems.

During the year, 6 Trough Closets were abolished, 4 being converted into water closets, and 2 were dispensed with on account of the properties being demolished.

### CANAL BOATS.

The number of boats on the register at the end of 1934 was 5. 30 boats were inspected during the year. The boats inspected were occupied by 47 male and 6 female adults and 5 male and 6 female children.

It was necessary in two instances to draw attention to contraventions of the Canal Boats Acts and the Regulations made thereunder, and in each case the defects were afterwards remedied.

### RAT REPRESSION.

The repression of rats has continued to receive attention during the year, and arrangements for the observance of National Rat Week from the 6th to 11th November were carried out.

The arrangements made in connection with this national effort were conducted on similar lines to those of 1933.

It is found that in the case of a large number of business premises regular steps are being taken to combat the rat menace, and if we are to look forward to any diminution in the rat population of the City, it will be necessary for all buildings prone to infestation to receive regular attention. The Department has had to deal with a number of premises not proof against infestation, and this has necessitated the reconstruction of buildings in order to remove the seat of attraction.

### PRIVATE STREETS AND PAVING OF YARDS.

It is pleasing to be able to report that steady progress is being carried on in regard to the paving of private streets and yards. During 1934 8 private streets have been made up under the Private Street Works Act.

In connection with private yards, this important sanitary improvement has continued to receive attention by the Public Health Department, and a total of 88 yards have been provided with surface paving or the existing paving has been improved.

### STREET GULLIES.

A total of 51 street gullies have been provided with modern fittings containing traps, and the work is being carried out in a systematic manner in those districts where the nuisance from effluvia has been most acute. It is to be hoped that this important work will continue to receive attention until all the obsolete types of gullies have been dispensed with.

### COMMON LODGING HOUSES.

Number on Register at end of 1934.	For both Sexes.	For Men only.	Number of Persons Registered for.
10	3	7	555



Two licences were not renewed during the year, and the houses referred to were situated in Clearance Areas dealt with under the Housing Acts. The demand for this type of accommodation has considerably declined during the past few years, and it is found that the number of houses available in the City is quite adequate at the present time to meet the needs of persons resorting to this type of house.

The following matters or contraventions of the Bye-laws were dealt with and remedied during the year:—

Cleansing	...	...	10	Vermin infestation	...	2
Water Closets cleansed.	2	Roof repaired	...	...	1	
Water Closets repaired.	2	Drain cleansed	...	...	1	

#### HOUSES LET IN LODGINGS.

Number on Register at end of 1934	...	...	15
Number taken off during the year	...	...	1
Number put on during the year	...	...	—
Total Accommodation (adults) at end of year			364

One house was removed from the register during the year, with accommodation for 62 persons. At the time of closing the house the occupants consisted of 17 adults and 14 children.

The question of sub-letting has continued to receive special attention from the Health Department, and it has been necessary to deal with 18 houses owing to the buildings being unsuitable for the purpose.

Whilst the housing shortage remains, the sub-letting of the large type of old house will continue to be resorted to, and it is necessary to exercise strict supervision over these houses, otherwise the sub-letting of houses would become more rampant. It should, however, be pointed out that the control of sub-let houses is becoming more difficult to deal with mainly on account of the powers of supervision being limited. As the law stands at present, any house may be opened out for the purpose of sub-letting, and our experience has often proved that many of the occupiers of these houses have resorted to this practice for considerable periods before the same have come under the observation of Officers of the Health Department. It is found that in many respects these houses, when discovered, fail to meet

with the provisions of the local bye-laws, indeed, many of the buildings are quite unsuitable to be occupied by more than one family. This unsatisfactory state of affairs has been going on for some years now, and will continue to exist until we are assisted by powers of compulsory registration.

It is to be hoped that in the near future better and improved accommodation will be provided for those persons desirous of residing in the tenement type of dwelling.

The following matters or contraventions of the bye-laws were dealt with and remedied during the year:—

Cleansing	...	...	5	Roof Repaired	...	...	1
Water Closet	...	...	3	Floor Repaired	...	...	1
Drainage	...	...	4	Yard Paved	...	...	1
Vermin Infestation	...	...	1				

ATMOSPHERIC POLLUTION.

Emission of Smoke from Industrial Chimneys, 1934.

TABLE I.

No. of Boilers.	No. of Observations.	Dense Black Smoke.—Minutes in the Half-Hour.									
		Nil	$\frac{1}{2}$	1	2	3	4	5	5-10	10-15	15-20
1	22	11	2	5	3	—	—	—	1	—	—
2	29	13	2	3	3	2	—	—	2	2	2
3	18	5	3	2	5	2	1	—	—	—	—
4	2	2	—	—	—	—	—	—	—	—	—
5	1	1	—	—	—	—	—	—	—	—	—
7	12	1	2	6	3	—	—	—	—	—	—
Kiln	1	—	1	—	—	—	—	—	—	—	—
Total	85	33	10	16	14	4	1	—	3	2	2

TABLE II.

Year.	No of Observations.	Dense Black Smoke.—Minutes in the Hour. —Percentage.													
		Nil.	1	2	3	4	5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
1923	257	34.6	11.2	7.3	5.8	6.6	7.7	11.6	5.0	4.2	3.5	1.1	8.3	0.3	—
1924	740	44.7	10.4	7.1	7.0	5.1	4.8	10.6	6.0	2.4	0.8	0.4	0.2	—	—
1925	318	52.2	12.2	10.6	9.6	3.4	3.4	5.0	1.5	0.6	0.9	—	—	—	—
1926	315	48.6	14.6	5.7	4.1	4.1	2.2	13.7	1.9	1.5	1.5	0.9	—	0.3	0.6
1927	925	57.9	9.5	8.6	2.2	5.4	0.2	8.8	4.7	0.6	1.2	0.1	0.3	—	—
1928	532	77.1	6.0	5.2	2.4	2.8	0.9	2.6	1.8	0.3	0.5	—	—	—	—
1929	76	59.21	5.26	13.1	6.6	2.6	2.6	—	—	—	—	—	—	—	—
1930	93	65.59	2.15	9.7	4.3	4.3	1.1	6.5	4.3	—	3.2	1.1	—	—	—
1931	55	60.00	16.36	3.63	1.81	1.81	1.81	1.81	—	—	3.63	—	—	—	—
1932	79	57.00	25.31	7.59	1.25	2.53	1.25	—	1.25	—	1.25	—	—	—	—
1933	48	50.00	29.16	6.25	4.08	—	2.08	8.33	—	—	—	—	—	—	—
1934	85	38.82	30.58	16.47	4.70	1.18	—	3.53	2.36	2.36	—	—	—	—	—

TABLE III.

MONTHLY RECORD OF SOOT DEPOSITS IN  
STANDARD GAUGES, 1934.

Month.		Tons of Total Solids per Square Mile.	
		Northgate Station.	Clarence Park Station
January	...	18.99	6.43
February	...	12.56	4.80
March	...	24.16	8.01
April	...	18.99	9.25
May	...	13.43	4.02
June	...	20.66	12.28
July	...	22.92	10.29
August	...	15.63	5.53
September	...	17.76	8.38
October	...	15.66	8.08
November	...	16.53	4.76
December	...	19.52	9.52
Average per month		18.07	7.61



TABLE IV.

ANNUAL RECORD OF SOOT DEPOSIT IN STANDARD  
GAUGES IN WAKEFIELD FROM 1927 to 1934.

Year. (Monthly Average).	Tons of Total Solids per Square Mile.	
	Northgate Station.	Clarence Park Station.
1927     ...     ...	27.47	21.66
1928     ...     ...	27.79	15.70
1929     ...     ...	20.65	9.54
1930     ...     ...	21.78	9.34
1931     ...     ...	20.98	8.58
1932     ...     ...	19.10	8.38
1933     ...     ...	21.31	8.75
1934     ...     ...	18.07	7.61

During the year it was necessary to serve 12 notices of offences under the Public Health (Smoke Abatement) Act, 1926, regarding the emission of Dense Black Smoke. Further observations were made in respect of each offending chimney, and improvements were found to have been effected.

At the same time it is to be regretted that the number of notices served is far in excess of previous years, and it is found that the cause of many of the excessive emissions is principally due to the careless manner of stoking the boilers concerned.

It is to be expected that much improvement in the methods of stoking will eventually result from the experience gained by a large number of boiler firemen whilst in attendance at the lectures provided on the work at the Technical College, and now engaged at local factories. Of course, we must not lose sight of the fact that many of the boiler plants installed at some of the factories are becoming somewhat worn out, and not fully capable of meeting the demands enforced upon them, but owing to financial considerations the owners no doubt have been compelled to postpone improvements in this section of their businesses until more prosperous times.

The standard soot gauges have continued to be used for recording soot deposits at the Northgate and Clarence Park Stations. At each station the average monthly deposits for the year show a slight decrease as compared with the year 1933, 18.07 tons being recorded at Northgate Station as compared with 21.31 tons in 1933 and 7.61 tons at the Clarence Park Station as against 8.75 tons in the previous year.

In connection with the examination of atmospheric deposits our thanks are again due to J. H. Garner, Esq., B.Sc., Chief Inspector of the West Riding of Yorkshire Rivers Board, for the kindly assistance he has rendered in this work.

Generally speaking the pollution of the atmosphere does not show any material signs of improvement, and until the problem of the domestic chimney is seriously tackled, either by means of a suitable and cheap smokeless fuel, or other suitable means of supplying heat at a low cost, it will not be possible to bring about any appreciable reduction in this long outstanding reform.

Owing to the small number of students presenting themselves for lectures in connection with Boiler Efficiency and Smoke Abatement, the class which has been given at the Technical College for the past four years has had to be discontinued.

It was hardly to be expected that these lectures would continue to be held indefinitely, and it is to be hoped that in the near future, providing a sufficient number of younger stokers are requiring the necessary training, that these classes will be resumed.

## MILK SUPPLY.

### Registration of Cowkeepers, etc.

Cowkeepers and Milk Purveyors resident in the City	19
Milk Purveyors Resident in the City ... ..	220
Milk Purveyors from Districts outside the City ...	42
(Included in the Registered Milk Purveyors resident in the City are 169, who are registered to sell milk from a shop in sealed bottles only).	
2 Cowkeepers were added to the Register during the year.	

- 2 Cowkeepers discontinued business during the year.  
 37 Milk Purveyors were added to the Register during the year.  
 15 Milk Purveyors discontinued business during the year.

The following improvements and matters have been dealt with at various Dairies during the year:—

Cleansing ... ..	8	Sterilizing Rooms	
New Dairy provided...	1	provided ... ..	2
Dairy reconstructed ...	2	Cooling Room	
Bottles exposed to		provided ... ..	1
contamination ...	1		
Refuse receptacle			
provided ... ..	1		

It has been necessary to require the remedy of the following matters at cowsheds during the year:—

Cleansing of Mistals...	8	Walls re-surfaced ...	3
Floors reconstructed...	3	Accumulation of	
Dirty Milking Stools..	3	manure removed..	2
Cesspools cleansed ...	3	Yard paved ... ..	1
Animals requiring		Drainage improved ...	1
cleansing ... ..	1		

### Bacteriological Examination of Milk.

During the year 51 samples of Milk were taken in the City and bacteriologically examined at the County Hall Laboratory.

The following tables give a summary of the results of the examinations as regards:—

#### (a) Bacterial Contents.

Total Bacteria per c.c.	Number of Samples.	Place of Production.	
		Inside City.	Outside City.
Under 5,000	6	1	5
5,000—10,000	5	2	3
10,000—50,000	16	5	11
50,000—100,000	7	4	3
100,000—500,000	9	2	7
500,000—1,000,000	8	4	4
Total	51	18	33



**(b) Presence of Bacillus Coli (in three tubes).**

Number of Tubes.	Number of Samples.	Place of Production.	
		Inside City.	Outside City.
Absent ...	26	9	17
No. 1 ...	4	—	4
Nos. 1 and 2 ...	6	2	4
Nos. 1, 2, and 3	14	5	9
Nos. 2 and 3 ...	1	1	—
<b>Total ...</b>	<b>51</b>	<b>17</b>	<b>34</b>

All the 51 samples of milk were examined by animal inoculation for tuberculosis infection, and 3 samples or 5.88 per cent. gave positive results as against 6.97 per cent. in 1933. In 1 case the milk had been produced at cowsheds situate inside the City boundary.

In addition to the above examinations, tests were applied at the time of purchasing the samples by means of a special apparatus ("Minit" Tester). The total number of tests made in this connection was 91, and 9 or 9.9 per cent. proved unsatisfactory. In the case of the unsatisfactory tests, steps were taken with a view to an improvement being effected and careful investigations made as to the methods of production and distribution.

The results of the samples submitted for bacteriological examination prove that a general improvement is taking place in the production of milk under more clean and wholesome conditions. Of the 51 samples submitted 28, or 54.9 per cent., were found to be satisfactory, and 23 samples were found to be of Grade "A" standard.

**Quality of Milk.**

111 samples of new milk were examined by the City Analyst for quality, and 11 (9.91 per cent.) were reported as not being up to standard, as against 18 (16.6 per cent. in 1933, and as compared with 7.7 per cent. for that of England and Wales for 1933).

The foregoing results showed a decided improvement in the quality of milk subjected to chemical analysis in 1934 in comparison with the previous year. The figure, however, is slightly higher than that for the whole country. The majority of the samples adversely reported upon were only slightly below the standard, and in no instance was the adulteration found to be of a serious nature.

### COMPOSITION OF MILK SAMPLES TAKEN DURING 1934.

Month.	Number of Samples.	Average Fat.	Average Non-Fatty Solids.
January ...	8	3.71	9.05
February ...	7	3.38	9.17
March ...	9	3.42	9.04
April ...	12	3.43	8.82
May ...	8	3.48	8.76
June ...	9	3.53	8.95
July ...	18	3.64	8.74
August ...	9	3.49	9.01
September ...	4	3.66	9.00
October ...	9	4.14	8.96
November ...	12	3.62	8.79
December ...	6	3.63	8.88.
Total ...	111	3.59	8.93

### The Milk (Special Designations) Order, 1923.

Number of Licenses in operation during 1934—9.

5 Licences are to retail Grade "A" Milk.

1 Licence is to produce Grade "A" Milk.

2 Licences are to retail Pasteurised Milk.

1 Licence is to Pasteurise Milk.

During the year a license has been issued under the Milk (Special Designations) Order, 1923, to a City Cow-keeper to produce and retail Grade "A" Milk.

Certified milk is supplied to both Municipal Hospitals in the City.

**Ice Cream.**

The control of the manufacture of ice cream has continued to receive careful attention during the year. The sale of this commodity increases year by year, and correspondingly the exercise of proper supervision over same becomes more difficult. In order to ensure that the conditions under which ice cream is manufactured are of a reasonable hygienic standard, it would appear desirable that further powers of control are necessary. These additional powers should include the compulsory registration of all persons and the premises where the business is carried on.

**General Remarks on Milk Supply.**

The supervision of the milk supply, both at the place of production and during distribution, continued to receive careful attention by the Health Department. Most of the cowsheds and dairies in the City have been conducted in a satisfactory manner, and it is pleasing to be able to record that the local authority is generally receiving the desired co-operation from cowkeepers and dairymen to assist them in their efforts to bring about a clean and wholesome milk supply. The result of the improvement, which continues to be effected in connection with the production and distribution of clean milk, is definitely borne out in the details of reports on samples submitted for bacteriological examination, and if this rate of progress is maintained still better results will be achieved.

It is pleasing to be able to state that the first licence to produce Grade "A" milk in the City was issued during the year.

The provision of sterilizing outfits at cowsheds and dairies is at present receiving serious attention from both producers and distributors, and at two buildings modern plants have been installed. It is to be hoped that this improved equipment will soon be provided at all our cowsheds and dairies in the near future.



## ANALYSIS OF FOOD AND DRUGS.

## (a) Samples Taken.

Name of Article.	Total.	Number of Samples taken for Analysis.		Number found Adulterated.		Percentage Adulterated.	
		Formal.	Informal.	Formal.	Informal.	Formal.	Informal.
New Milk (Quality)	111	111	—	14	—	12.61	—
New Milk (Certified)	1	1	—	—	—	—	—
Sterilized Milk ...	2	2	—	—	—	—	—
Pasteurised Milk ...	2	2	—	—	—	—	—
New Milk, Grade "A" ...	3	3	—	—	—	—	—
Dried Milk ...	1	—	1	—	—	—	—
Condensed Milk ...	1	—	1	—	—	—	—
Ammoniated Tincture of Quinine	2	—	2	—	—	—	—
Baking Powder ...	2	—	2	—	—	—	—
Bi-Carbonate of Soda ...	1	—	1	—	—	—	—
Boric Ointment ...	1	—	1	—	—	—	—
Butter ...	3	—	3	—	—	—	—
Camphorated Oil ...	2	—	2	—	—	—	—
Castor Oil ...	1	—	1	—	—	—	—
Cheese (Cheshire)	1	—	1	—	—	—	—
Coffee ...	1	—	1	—	—	—	—
Cream ...	3	—	3	—	—	—	—
Cream, Tinned ...	1	—	1	—	—	—	—
Cream, Ice ...	1	—	1	—	—	—	—
Cream of Tartar ...	1	—	1	—	—	—	—
Custard Powder ...	1	—	1	—	—	—	—
Dripping (Beef) ...	1	—	1	—	—	—	—
Epsom Salts ...	1	—	1	—	—	—	—
Fish Paste ...	1	—	1	—	—	—	—
Fruit, Dried ...	1	—	1	—	—	—	—
Fruit Wine ...	1	—	1	—	—	—	—
Ground Ginger ...	1	—	1	—	—	—	—
Jam (Raspberry) ...	1	—	1	—	—	—	—
Lard ...	2	—	2	—	—	—	—
Lemonade Powder	2	—	2	—	—	—	—
Lemon Curd ...	1	—	1	—	—	—	—
Liquorice Powder	1	—	1	—	—	—	—

Name of Article.	Total.	Number of Samples taken for Analysis.		Number found Adulterated.		Adulterated. Percentage	
		Formal.	Informal.	Formal.	Informal.	For- mal.	In- formal.
Margarine ...	1	—	1	—	—	—	—
Minced Beef ...	1	—	1	—	—	—	—
Mint Sauce ...	1	—	1	—	—	—	—
Mustard ...	1	—	1	—	—	—	—
Olive Oil ...	1	—	1	—	—	—	—
Pancake Powder ...	1	—	1	—	—	—	—
Paregoric ...	1	—	1	—	—	—	—
Parrish's Food ...	1	—	1	—	—	—	—
Peas (Tinned) ...	1	—	1	—	—	—	—
Pepper (White) ...	1	—	1	—	—	—	—
Polony ...	1	—	1	—	—	—	—
Potted Meat ...	2	—	2	—	—	—	—
Raisin Wine ...	1	—	1	—	—	—	—
Rice ...	1	—	1	—	—	—	—
Sauce (Fruit) ...	1	—	1	—	—	—	—
Sausage ...	3	1	2	—	—	—	—
Seidlitz Powder ...	1	—	1	—	—	—	—
Self Raising Flour	1	—	1	—	—	—	—
Sponge Cakes ...	1	—	1	—	—	—	—
Suet, Shredded ...	1	—	1	—	—	—	—
Sultanas ...	1	—	1	—	—	—	—
Sweet Spirit of Nitre	2	—	2	—	—	—	—
Sweets (Liquorice All-sorts) ...	1	—	1	—	—	—	—
Tea ...	2	—	2	—	—	—	—
Tincture of Iodine	1	—	1	—	—	—	—
Tripe ...	1	—	1	—	—	—	—
Vinegar ...	3	1	2	—	2	—	100%
Totals ...	189	121	68	14	2	12.61	2.94

## (b) Particulars of Adulterated Samples.

No.	Article.	Defects.	Action Taken.
389	New Milk.	0.52 per cent. deficiency Milk Fat ...	This sample was taken in following up a previous defective sample No. 351, obtained in 1933. Warning letter sent to Vendor.
391	do.	0.10 per cent. do. ...	This sample was taken in following up a previously defective sample No. 341, taken in 1933. Warning letter sent to Vendor.
398	do.	0.22 per cent. do. ...	Follow up sample No. 531 taken and found to be genuine. Warning letter sent to Vendor.
420	do	0.18 per cent. do. ... Found to contain 7 per cent. added water.	Follow up sample No. 428 taken and found to be deficient. Appeal to Cow samples taken and found to be genuine. Town Clerk sent warning letter to Vendor.
427	do.	0.58 per cent. deficiency Milk Fat ...	Follow up sample No. 429 taken and found to be genuine. Town Clerk sent warning letter to Vendor.
428	do.	Found to contain 1.9 per cent. of added water.	This sample was a follow up of No. 424. Town Clerk sent warning letter to Vendor.



No.	Article.	Defects.	Action taken.
445	New Milk.	0.08 per cent. deficiency Milk Fat ...	Follow up sample No. 457 taken and found to be deficient.
456	do.	Found to contain 1.4 parts per cent. added water.	Follow up sample No. 479 taken and found to be genuine. Town Clerk sent warning letter to Vendor.
457	do.	0.40 per cent. deficiency Milk Fat ...	Information sent to W.R. County Authority. Town Clerk sent warning letter.
464	do.	Found to contain 1.9 parts per cent. added water.	Follow up sample No. 480 taken and found to be genuine. Town Clerk sent warning letter to Vendor.
477	do.	0.58 per cent. deficiency Milk Fat ...	Follow up sample No. 492 taken and found to be genuine. Town Clerk sent warning letter to Vendor.
513	Vinegar.	0.8 per cent. deficiency Acetic Acid ...	Town Clerk wrote letter, and satisfactory explanation was given.
532	New Milk.	Found to contain 6.6 parts per cent. added water.	Follow up samples Nos. 537 and 538 taken in course of delivery from producer to vendor. No. 537 was reported to be adulterated.

No	Article.	Defects.	Action taken.
537	New Milk.	Found to contain 5.6 per cent. added water.	Vendor prosecuted. Fine £5. Costs £4 6s.
539	do.	0.10 per cent. deficiency Milk Fat ...	Case referred to County Authority.
546	Vinegar.	0.98 per cent. deficiency acetic acid ...	Follow up sample No. 558 taken and found to be genuine. Town Clerk wrote Vendor, and Satisfactory explanation was given.

### SLAUGHTERHOUSES.

The following table shows particulars of all private slaughterhouses in the City at the end of 1934:—

Number of Slaughterhouses.			
Registered ...	...	...	7
Licensed ...	...	...	15
Total ...			22

The above figures do not include the Public Slaughterhouse owned by the Corporation.

During the year 1934, one additional Private Slaughterhouse was licensed and one Registered Slaughterhouse was discontinued.

The observance of the Public Health (Meat) Regulations, 1924, has been satisfactorily carried out by Meat Traders during the year, and no contravention of the regulations was reported.

## Slaughter of Animals Act, 1933.

The above Act came into operation on the 1st January, 1934, and one of the requirements of the Act is that no animal shall be slaughtered in a slaughter-house or knackers yard by any person who is not the holder of a licence granted by the Local Authority. During 1934, 100 persons were licensed under this Act to slaughter animals at the Public or Private Slaughterhouses in the City.

The arrangements for putting into operation the above Act included that all animals, including sheep, shall be slaughtered by a mechanically operated instrument. As previously pointed out, a bye-law has been in force in the City regarding the stunning of all animals, and this has now been superseded by the Act of 1933.

The operation of the Act has been carried out in a satisfactory manner throughout the year, and no complaints of any kind have been made as to any deleterious effect on the keeping and marketable qualities of the meat. At one Private Slaughter-house the occupier has installed an electric stunning instrument, and the operation of same has proved highly satisfactory, both in respect to efficiency of slaughter and condition of the meat after slaughter.

### Number of Animals Slaughtered in the City During 1934.

	Beasts.	Calves.	Pigs.	Sheep.	Total.
Public Slaughter House	3743	295	2184	9,744	15,966
Private Slaughterhouses	1831	181	4376	4,260	10,648
Total for the Year	5574	476	6560	14,004	26,614

A total of 1,122 more animals were slaughtered in the City during 1934 than in the previous year. The increase was in connection with beasts (977), calves (134), and sheep (725), whilst pigs showed a decline. The increase in animals slaughtered was Public Slaughter House—849, and Private Slaughter Houses—273.



From the above table it will be seen that a total of 26,614 animals were slaughtered in 1934 as against 25,492 in the previous year.

### Condemnations of Unsound Food.

2,615 Meat	...	...	...	Weighing 5,346 Stones.
4 Rabbits	...	...	...	
2 Fish	...	...	...	
17 Tinned Goods	...	...	...	1,656 Tins.
2 Poultry	...	...	...	
2 Vegetable	...	...	...	
5 Fruit	...	...	...	

### Where Condemnations Made.

8 Cold Stores.	11 Warehouses.
17 Shops.	646 Private Slaughter Houses.
2 Railway Goods Yard.	1,955 Borough Slaughter House.
8 Borough Market.	

In one instance it was necessary to seize the food by Statutory procedure and to obtain a Magistrate's Order for the condemnation and destruction of same.

### Number of Carcasses Condemned.

#### Condemnations due to Tuberculosis.

Animals.	Whole Carcasses.		Part Carcasses.	
	Borough Slaughter House.	Private Slaughter House.	Borough Slaughter House.	Private Slaughter House.
Cows ...	*108	10	42	6
Heifers	1	—	—	1
Bullocks	2	1	1	—
Calves ...	6	—	—	—
Pigs ...	7	7	—	1
Total	124	18	43	8

\* Including 3 animals slaughtered under the Tuberculosis Order, 1925, from premises situate within the City.

**Condemnations due to other Defined Disease.**

Animals.	Whole Carcases.		Part Carcases.	
	Borough Slaughter House.	Private Slaughter House.	Borough Slaughter House.	Private Slaughter House.
Cows ...	16	—	30	1
Heifers	—	—	—	—
Bullocks	1	—	—	—
Calves ...	5	—	1	—
Pigs ...	9	5	1	2
Sheep ...	26	3	2	—
Totals ...	57	8	34	3

**Condemnations of Offal.**

Animals.	Tuberculosis.				Other Conditions.			
	Boro. Sl. House.		Priv. Sl. House.		Boro. Sl. House.		Priv. Sl. House.	
	Condem-nations.	Weight Stones.	Condem-nations.	Weight Stones.	Condem-nations.	Weight Stones.	Condem-nations.	Wt. Sts.
Bovines ...	667	1438	215	400	422	584	62	101
Sheep ...	—	—	—	—	27	23	3	2
Pigs ...	137	156	140	148	29	24	36	34
Calves ...	15	11	—	—	12	9	—	—
Totals ...	819	1605	355	548	490	640	101	137

	1933.	1934.
Percentage of Condemnations due to Tubercular Disease ... ..	68.38	63.70
Percentage of Bovines affected with Tubercular Disease ... ..	16.66	18.90
Percentage of Pigs affected with Tubercular Disease ... ..	4.09	4.43

	1933.	1934.
Percentage of all animals slaughtered in the City affected with disease	6.04	7.30
Percentage of all animals slaughtered in Private Slaughterhouses affected with disease ... ..	3.97	4.63
Percentage of all animals slaughtered in Borough Slaughterhouses affected with disease ... ..	7.46	9.82

In addition to the above, a total of 72 whole carcasses and parts of eight carcasses, along with edible offal, giving a total weight of 18 tons 7 cwts., were condemned as unfit for human consumption. These condemnations were made in connection with the slaughter of animals brought into the Public Abattoir by the Chief Veterinary Officer of the West Riding County Council, from districts situate outside the City Boundary.

The Borough Slaughterhouse has continued to be a centre for the slaughter of animals under the Tuberculosis Order, 1925, a total of 147 animals having been dealt with during the year.

#### REMARKS ON FOOD INSPECTION.

The inspection and supervision of food supplies calls for a large amount of time, and it is found that purveyors of meat and other foodstuffs are becoming more enlightened to the need for their businesses to be carried on under improved hygienic conditions. The number of complaints made to the Health Department during the year regarding the sale of unsound and unwholesome food, have been negligible, and this undoubtedly testifies to the desire of traders in general to prepare and distribute food stuffs of a high standard.

The inspection of meat continues to take up a large amount of the District Sanitary Inspector's time, and this work has been added to during the year on account of the increase in the number of animals slaughtered. In addition all shops and stalls where meat is sold are regularly inspected, and if any insanitary conditions are discovered, measures are taken to secure their abatement.



It is to be hoped that the provision of facilities for the centralisation of the slaughter of animals, and the treatment of the various bye-products connected with same, will be pressed forward with the least possible delay.

In connection with the inspection of meat and food products, I should like to direct attention to certain difficulties arising from same. Since the advent of the Housing Estates on the several outskirts of the City, the hawking of meat in vans has become more prevalent, and this renders proper supervision and inspection most difficult. The purveyors concerned do not carry on the business from a shop, and in consequence proper storage accommodation for meat and meat products is not provided. The tendency for this kind of trading is increasing year by year, and in order to be able to overcome the difficulties we are encountering at the present time, it is essential in the interests of Public Health, that further powers should be obtained to control the exposure and storage of meat distributed in this manner.

#### RAG FLOCK ACTS, 1911 and 1928.

During the year 2 samples of Rag Flocks were obtained and submitted for analysis under the Rag Flock Acts.

The City Analyst reported that both of the samples were satisfactory. The samples were obtained at premises where the manufacture of upholstery is carried on, the material being used in connection with same. No manufacture of Rag Flocks is carried on in the City.

#### OFFENSIVE TRADES.

##### Offensive Trades on the Register at the end of 1934.

Trade.							Number.
Tripe Boiling	...	...	...	...	...	...	5
Gut Scraping	...	...	...	...	...	...	2
Rag and Bone Dealing	...	...	...	...	...	...	3
Fish Frying	...	...	...	...	...	...	66
Total	...	...	...	...	...	...	76

Offensive Trades taken off Register during 1934	...	...	...	...	...	3
Offensive Trades put on Register during 1934						1

All the Offensive Trade premises have been kept under regular supervision throughout the year, and it is found that the various businesses were being conducted in a satisfactory manner.

Certain matters of a minor character were found to require attention, and were satisfactorily dealt with as follows:—

Collection of Offal	...	...	...	2
Cleansing	...	...	...	4
Accumulations	...	...	...	2
Drainage	...	...	...	1

During the year 1 Gut Scraper was added to the Register, and 2 Fish Fryers and 1 Rag and Bone Dealer were taken off the Register.

Improvements have been effected at three of the older type of buildings used for the business of fish frying. In each case the improvements carried out have brought the premises more into line with modern hygienic requirements.

ANNUAL REPORT on the Administration of the Factory and Workshops Act, 1901, in connection with:—

## FACTORIES, WORKSHOPS, AND WORKPLACES.

### 1. Inspection of Factories, Workshops, and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Occupiers Prosecuted.
Factories (including Factory Laundries) ...	22	4	—
Workshops (including Workshop Laundries) ...	266	2	—
Workplaces (other than Outworkers' premises)	25	—	—
Total ... ..	313	6	—

## 2.—Defects found in Factories, Workshops, and Workplaces.

Particulars.	Number of Defects		Referred to H.M. Inspector.	Number of Offences in respect to which Prosecutions were instituted.
	Found.	Remedied.		
Nuisances under the Public Health Acts: —	14	14		
Want of Cleanliness ... ..	1	1		
Drains Repaired ... ..	—	—		
Want of Ventilation ... ..	—	—		
Walls ... ..	—	—		
Overcrowded ... ..	—	—		
Floors ... ..	7	7		
Other Nuisances ... ..	5	5		
Sanitary { Insufficient ... ..	10	10		
Accommo- { Unsuitable or defective ...	2	2		
dation. { Not separate for sexes ...				
Total ... ..	39	39		

### OUTWORK IN UNWHOLESOME PREMISES. SECTION 108.

Nil.

### REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at end of year.	Number.
Bakehouses (Factory) ... ..	10
Bakehouses (Workshops) ... ..	48
Dressmaking ... ..	9
Saddlery ... ..	3
Boot Repairing ... ..	15
Millinery ... ..	2
Upholstery ... ..	6
Tailoring ... ..	7
Joinery ... ..	11
Other Workshops ... ..	57
Total ... ..	168



During the year 8 Notices were received from H.M. Inspector of Factories regarding the following:—

Defects.	Found.	Remedied.
Insufficient Water Closet Accommodation ... ..	4	4
Insufficient Ventilation ... ..	5	5
Water Closet ... ..	2	2

## HOUSING.

### (a) Statistics.

#### Number of New Houses erected during 1934.

Size of House according to number of Habitable Rooms.	Total.	Built by Corporation..	Built by Private Enterprise.
3 roomed ... ..	1	—	1
4 „ ... ..	164	83	81
5 „ ... ..	66	—	66
6 „ ... ..	52	—	52
7 roomed and over ...	7	—	7
Total ... ..	290	83	207

The number of New Houses erected in each of the Wards is as follows:—

Alverthorpe ...	105	Kirkgate ...	1
North Westgate .	119	Calder ... ..	22
South Westgate .	4	Belle Vue ...	8
St. John's ...	19	Sandal ... ..	8
Eastmoor ...	4		

### 1.—Inspection of Dwelling Houses during the Year.

(1) (a) Total number of Dwelling Houses inspected for housing defects (under Public Health or Housing Acts) ...	453
(b) Number of Inspections made for the purpose ... ..	1,433

(2) (a)	Number of Dwelling Houses included in Sub Head (1) above, which were inspected and recorded under the Housing Consolidated Regulations, 1925. (In addition 1,214 houses were surveyed in Clearance Areas)	155
(b)	Number of Inspections made for the purpose	403
(3)	Number of Dwelling Houses found to be in a state so dangerous or injurious as to be unfit for human habitation	29
(4)	Number of Dwelling Houses (exclusive of those referred to under the preceding Sub Head) found not to be in all respects reasonably fit for human habitation	124

## 2.—Remedy of Defects during the Year without Service of Formal Notice.

Number of defective Dwelling Houses rendered fit in consequence of informal action by the Local Authority or their Officers	414
---	-----

## 3.—Action under Statutory Powers during the Year.

A.—Proceedings under Sections 17, 18 and 23 of the Housing Act, 1930:—

(1)	Number of Dwelling Houses in respect of which Notices were served requiring repairs	9
(2)	Number of Dwelling Houses which were rendered fit after service of Formal Notice.	
(a)	By Owners	9
(b)	By Local Authority in default of Owners	—

B.—Proceedings under Public Health Acts.

(1)	Number of Dwelling Houses in respect of which Notices were served requiring defects to be remedied	30
-----	--	----

(2)	Number of Dwelling Houses in which defects were remedied after service of Formal Notice.	
	(a) By Owners ... ..	30
	(b) by Local Authority in default of Owners ... ..	—

C.—Proceedings under Sections 19 and 21 of the Housing Act, 1930:—

(1)	Number of Dwelling Houses in respect of which Demolition Orders were made ... ..	10
(2)	Number of Dwelling Houses demolished in pursuance of Demolition Orders ... ..	10

(In addition to the above, 14 houses were represented as unfit for human habitation, and undertakings were entered into between the Council and Owners of the respective properties, under Section 19 (2) that the Dwelling Houses should not be used for human habitation).

D.—Proceedings under Section 20 of the Housing Act, 1930:—

(1)	Number of Separate Tenements or Underground Rooms in respect of which Closing Orders were made ...	—
(2)	Number of Separate Tenements or Underground Rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit ... ..	—

### Vans and Sheds.

The regulation of this type of dwelling is governed by Bye-laws made by the Council in 1903, which contain certain provisions primarily intended to apply to movable vans stationed on lands for short periods. It is, however, found that dwellings of this character are becoming more numerous in the City, and the tendency is for the structures to be occupied as permanent buildings. The majority of the vans coming under the notice of the Public Health



Department were stationed in unsuitable positions, and owing to the Bye-laws being restricted in their application, the greatest difficulty has been experienced in preventing colonies of permanent buildings being set up.

In order to prevent dwellings of this character becoming permanent structures, it would appear desirable that consideration should be given to the question of obtaining some amendment of the regulations now in force.

### **Remarks on Housing.**

The inspection of properties, both in connection with the clearance of unfit houses and for defects under the Housing Consolidated Regulations, 1925, still continued to take up a considerable amount of the time of the inspectorial staff.

In addition to the 155 houses inspected under the Regulations, a further 1,214 houses were surveyed in connection with Clearance Areas.

The houses dealt with under the Regulations were for the most part consisting of properties capable of being made fit, but in the case of 24 houses it was necessary for the properties to be dealt with by procedure under Section 19 of the Housing Act, 1930, 10 houses being subject to Demolition Orders, and in the case of the other 14 houses, Undertakings were accepted from the owners that they should not be used for human habitation.

A total of 10 houses were demolished in consequence of action under Section 19 of the Housing Act, 1930; all the properties were in connection with Orders made in 1934, and the persons displaced were 50. The number of persons displaced as a result of undertakings was 55.

In connection with these properties, subject to undertakings not to use same for human habitation, I should like to draw attention to the unsatisfactory features resulting in allowing these buildings to remain. During the past 7 years, 50 houses have been dealt with in this way, and on making periodic inspections of the buildings, it is found that in the majority of cases the properties are allowed to become dilapidated, and sooner or later consideration will have to be given to them on the grounds of structural safety, and the detrimental effect on the public health. In

addition to the points mentioned, they are also detracting from the amenities of the localities in which they are situated, and in some cases are an eyesore. Only 15 buildings out of the total of 50 are at present being utilised for the purpose of stores, etc.

It will therefore be obvious that in order to check the growth of this undesirable type of building, greater consideration will need to be given to the whole question of accepting undertakings on similar conditions as these under review.

Whilst dealing with unsatisfactory buildings, it will not be out of place to draw attention to the question of the undesirable conditions prevailing in respect of many disused premises situated in various parts of the City. Many of the buildings concerned have been allowed to get into a decrepit state, and are undoubtedly detrimental to health. These buildings are mostly found on sites situated in enclosed spaces, and as such it is not possible to deal with same under existing powers. It is true to say that we are getting rid of these unsatisfactory conditions in connection with clearance areas under provisions of Housing legislation, but in some instances our progress is somewhat retarded owing to the restrictions met with in existing enactments.

As briefly referred to in the Annual Report for 1933, representation was made on the 9th January, 1934, in connection with 212 houses having a population of 781 persons. The properties were contained in six clearance areas as follows:—

Areas.	Houses.	Population.
Northgate No. 1     ...     ...	111	372
Northgate No. 2     ...     ...	56	242
Northgate No. 3     ...     ...	11	55
Northgate No. 4     ...     ...	10	35
Eastmoor No. 1     ...     ...	18	59
Sandal No. 1     ...     ...	6	18
Totals     ...     ...	212	781

The City Council on the 6th February, 1934, made Orders in respect of each of the areas referred to, and the areas were dealt with by Compulsory Purchase. A Public Inquiry was held by the Minister of Health on the 12th June, 1934, and the Orders were confirmed by the Minister on the 1st September, 1934, with the following exceptions:—

- (a) Exclusion of three separate dwelling-houses in the Northgate No. 1 Area.
- (b) The total exclusion of all the six houses in the Sandal Area, with the provision that the same be dealt with by other procedure.

The whole of the Northgate No. 4 Area was demolished during 1934, and the persons displaced were rehoused at the Darnley Estate.

In order to provide rehousing accommodation for the families included in the Orders, the Council gave instructions for houses to be erected as follows:—

George a Green Road ...	20	} All are A3 type.
Eastmoor ...	16	
Horbury Road Estate ...	84	

In addition to these, houses for the accommodation of aged persons are being erected as follows:—

Oakenshaw Street ...	12
Thornes Road ...	24

### **Re-housing.**

During the year a further 80 houses on the Darnley Estate were completed for re-housing displaced tenants from insanitary houses dealt with by individual demolition orders under Section 19 of the Housing Act, 1930.

The transference of the tenants to re-housing houses has continued to be under the control of the Health Department, and all the additional 80 houses were fully occupied at the end of 1934.

The general supervision of the 168 houses on the Darnley Estate has continued to be carried out under the direction of the Health Department, and generally speaking the majority of the families have responded in a satisfactory



manner to the improved housing conditions offered to them. There are, however, a number of the families, particularly those recently transferred, which will require further guidance and control before they may be considered to be satisfactory tenants.

It is also pleasing to find that in addition to maintaining the inside part of the house in a clean condition a large number of the tenants are taking a live interest in the cultivation of the gardens attached to the houses.

It is regrettable, however, to find that better care and attention is not given to the preservation of the grass verges provided in the lay-out of the Darnley and the other Municipal Housing Estates in the City. It is found that the verges are commonly used as footpaths, both by the tenants and others frequenting the Estates. The verges, when first laid, add considerably to the amenities of the dwellings, and are a decided advantage from the aspect of public health. It is a pity to find that what was originally intended to be a means of beautification, is actually spoiling the general appearance of the several Estates.

It might be worth while giving consideration to the provision of suitable notices restricting the traversing of these verges, and by means of suitable propaganda in the various schools and otherwise.

### **Verminous Houses.**

The question of the verminous house, which is becoming a most difficult problem, has again received the serious attention of the Health Department.

The increase in prevalence of vermin infestation during the past few years has mainly arisen on account of the large number of families transferring to different houses, and also in connection with the clearance of properties having long-standing infestations.

During the year, a large number of houses have been subject to fumigation with sulphur dioxide and hydrocyanic acid gases, and in the majority of cases the results have been satisfactory.

In connection with the transference of tenants from insanitary houses to re-housing estates, the houses in New Street have continued to be used for the purpose of transitional treatment. These houses have been used for the cleansing and disinfesting of families since January, 1933. The properties were originally four separate dwelling-houses, and were converted so as to allow two families to be accommodated during the process. The number of families receiving treatment at the premises during 1933 was only 5, this being chiefly on account of the small number of new houses available for re-housing. During 1934 the premises have been in continuous occupation, and a total of 26 families have passed through the treatment, the average length of occupation being 21 days for each family. Briefly the method adopted has been as follows:—The premises are so constructed that it is possible to deal with the contents of the old house in one section, and the articles of furniture, etc., after having been cleansed and disinfested, are removed to a clean section. On first entering the station, the various articles of furniture are carefully examined to ascertain the extent of the infestation, and if it is found that any of the goods are beyond being cleansed adequately to be safe for further use, the occupier is strongly advised to surrender them for destruction. In this way such articles as straw mattresses, old pictures, worn-out upholstered furniture, and other household goods are disposed of, and a prominent seat of infestation is definitely removed. This system has worked satisfactorily up to the present, and it is found that the occupiers are always willing to agree to the suggestions offered. After all the household goods have been examined, advice and instructions are given on the methods to be pursued in thoroughly cleansing the articles of furniture, such as tables, sideboards, and chairs, etc., particularly required for immediate use. The articles of furniture referred to are those where the infestation is usually of minor dimensions, and on account of the solid nature of construction, readily render themselves available for cleansing to be carried out with the least difficulty. The method of cleansing is carried out by means of soap and water, with the addition of a disinfectant. The bedstead and any mattresses of the wire variety are next dealt with. This is effected by washing over with paraffin. In the case of wood bedsteads, the ordinary means of cleansing are adopted.

It might be pointed out that the contents of drawers contained in chests, etc., are left over until all the furniture is completed, so as to allow better facilities for treatment by slow stages.

If it is found necessary for any goods to be treated with fumigation this is carried out in the special "disinfesting" compartment, by the application of sulphur dioxide gas.

It will be seen that by the gradual process of cleansing, all the contents of the house come under close inspection, and eventually undergo thorough cleansing. In addition to the cleansing and disinfestation carried out during transitional treatment, the families are advised on the methods required to be adopted and maintained in order to satisfactorily occupy a municipal house.

Before the family are allowed to remove to the new house, sufficient time is allowed to elapse in order that observations may be made as to whether any response is forthcoming to the advice and instructions which have been offered, and occasionally this demands a lengthy period being taken up in transitional treatment. It might be pointed out that in the majority of cases it is usual for new furniture to be obtained, and arrangements are made for this to be delivered direct to the new house. All articles of bedding are steam disinfected, and all furniture is again subject to the strictest scrutiny.

The families are kept under observation on entering the new house, and it is found that the majority of them soon settle to their new environment. A recent inspection has been made at the houses occupied since the tenants were displaced, and it is reported that out of the 31 families who have undergone this form of vermin disinfestation, in only one instance have vermin reappeared.

On account of the many ways in which vermin may be reintroduced into the house, it has not been definitely proved how in this particular case the house became re-infested.



The various ways in which vermin may be reintroduced into a dwelling-house are such as to render the preventative measures taken prior to the family being re-housed somewhat futile. It is often found that vermin is brought into the house by the purchase of second-hand furniture and discarded clothing, and the eminent danger from such a practice is not always realised. Of course, there are other ways that vermin infestation may be brought about, but from extensive enquiries carried out into cases of vermin reinfestation, the articles mentioned appear to be the more common cause.

The problem of vermin infestation will, I am afraid, continue until more stringent means are available to prevent their dissemination, and it is to be hoped that the deliberations and discussions of the Special Committee recently set up by the Minister of Health, will prove of assistance in our efforts to combat this loathsome pest.

W. ROBERTS.

# PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASES.

## Notification of Infectious Diseases, 1934.

DISEASE.	Number of Cases Notified.													Number of Deaths.													
	At all Ages.	0-1 yr.	1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-35 yrs.	35-45 yrs.	45-65 yrs.	65 and over.	Treated in Hospital.	At all Ages.	0-1 yr.	1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-35 yrs.	35-45 yrs.	45-65 yrs.	65 and over.
Smallpox ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Plague ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria (including Membranous Croup)	308	—	7	12	24	21	126	77	15	21	2	3	—	299	26	—	1	1	4	1	13	6	—	—	—	—	—
Erysipelas ... ..	26	—	—	—	—	—	—	1	—	4	6	11	4	7	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever ... ..	341	1	6	22	41	45	143	48	11	19	5	—	—	219	3	1	—	2	—	—	—	—	—	—	—	—	—
Typhus Fever ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing Fever ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued Fever ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever ... ..	7	—	—	—	—	—	—	—	1	5	1	—	—	6	4	—	—	—	—	—	—	—	—	2	2	—	—
Puerperal Pyrexia ... ..	12	—	—	—	—	—	—	—	2	9	1	—	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebrospinal Meningitis	6	—	1	—	1	—	1	1	—	—	1	1	—	6	4	—	1	—	1	—	—	—	—	—	1	1	—
Poliomyelitis ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum	6	6	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
Primary Pneumonia ... ..	53	3	2	5	—	—	3	2	3	10	10	13	2	24	32	7	2	—	—	1	—	2	—	3	6	8	3
Influenzal Pneumonia ... ..	2	—	—	—	—	—	—	—	—	1	—	—	—	1	3	—	—	—	—	—	—	—	—	—	1	1	1
†Dysentery ... ..	12	—	—	—	—	—	—	1	—	2	1	6	2	12	1	—	—	—	—	—	—	—	—	—	—	—	—
*Pulmonary Tuberculosis	44	—	—	—	—	—	1	—	8	18	8	9	—	6	34	—	—	—	—	—	1	—	2	15	4	12	—
*Non-pulmonary Tuberculosis ... ..	11	1	1	—	1	—	2	2	1	3	—	—	—	8	4	1	1	—	—	—	—	—	—	2	—	—	—
†Measles ... ..	306	36	32	53	61	124	—	—	—	—	—	—	—	2	2	1	1	—	—	—	—	—	—	—	—	—	—
†Whooping Cough ... ..	27	—	8	6	8	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Polioencephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Encephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lethargica ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Food Poisoning ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pemphigus Neonatorum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals ... ..	1162	47	57	99	136	195	276	132	41	92	35	43	9	601	113	10	6	3	5	2	14	8	2	22	14	23	4

\* Cancelled cases excluded.

† First cases in household only.

‡ All Mental Hospital patients, and all non-residents.

### Diphtheria.

308 cases of Diphtheria were notified (132 males and 176 females), giving an attack rate of 5.11 per 1,000 of the population, as compared with 3.15 in 1933 and 1.85 the average for the ten years 1924-33. There were 118 more cases notified than in 1933.

The cases occurred in the Wards as follows :—

North Westgate	74	Sandal	... 26	Kirkgate	... 15
Eastmoor	... 38	Northgate	... 26	Calder	... 12
Primrose Hill	... 29	Alverthorpe	... 24	St. John's	... 11
South Westgate	28	Belle Vue	... 21	Clayton Hospital	3
				County Hospital	1
					—
					Whole City 308
					—

The number of cases notified monthly were as follows :—

January	10	1st Quarter :	July	15	3rd Quarter :
February	23		August	14	
March	32		September	40	
		65			69
April	11	2nd Quarter :	October	42	4th Quarter :
May	7		November	45	
June	20		December	49	
		38			136

The number of cases in the various age periods were as follows :—

Under 1 year	...	—	10—15 years	...	77
1—2 years	...	7	15—20	„	15
2—3	„	12	20—35	„	21
3—4	„	24	35—45	„	2
4—5	„	21	45—65	„	3
5—10	„	126			—
			Total	...	308

299 cases (97 per cent.) were removed to the City Hospital. Seven cases were isolated at home, and in addition two died at home before they could be removed to Hospital.

There were 26 deaths (12 males and 14 females), giving a case mortality of 8.4 per cent., and a death rate of 0.45 per 1,000 of the population, as compared with 0.33 in 1933 and 0.16 the average for the ten years 1924-33. The corresponding rate in England and Wales in 1934 was 0.10, and in the large towns 0.11.



The deaths occurred in the following age groups:—

Under 1 year	...	—	4—5 years	...	...	1
1—2 years	...	1	5—10 „	...	...	13
2—3 „	...	1	10—15 „	...	...	6
3—4 „	...	4				
						—
			Total	...	...	26

## Diphtheria and Home Conditions.

Of the 248 ordinary dwellings affected, 35 had less than one person per room, 185 had from one to two persons per room, and 28 had more than two persons per room. 11 per cent. of the houses were overcrowded according to the standard of the Registrar-General.

Home	}	Under 14 years of age—407 (Susceptibles—385).
Contacts		Over 14 years of age—714 (Susceptibles 676).

Amongst the 385 susceptible contacts under 14 years of age, there occurred 3 return cases and 20 secondary cases. Amongst the 676 susceptible contacts over 14 years of age, there occurred 1 return case and 3 secondary cases.

Houses with Second Cases	}	Under 1 person per room ...	...	3
		1 and up to 2 persons per room ...		14
		More than 2 persons per room ...		2
Houses with Return Cases	}	Under 1 person per room ...	...	—
		1 and up to 2 persons per room ...		2
		More than 2 persons per room ...		1

## Scarlet Fever.

341 cases of Scarlet Fever (158 males and 183 females) were notified, giving an attack rate of 5.66 per 1,000 of the population, as compared with 5.28 in 1933 and 3.37 the average for the ten years 1924-33. There were 23 more cases notified than in 1933.

The cases occurred in the Wards as follows :—

North Westgate	65	Belle Vue	... 34	Kirkgate	... 17
Sandal	... 36	Calder	... 30	St. John's	... 14
Eastmoor	... 35	Alverthorpe	29	Northgate	... 13
Primrose Hill	34	South Westgate	25	Clayton Hospital	7
				County Hospital	2
					<hr/>
				Total	... 341

The number of cases notified monthly were as follows:—

January	30	} 1st Quarter:		July	22	} 3rd Quarter:	
February	44			August	15		
March	33		107	September	34		71
April	30	} 2nd Quarter:		October	34	} 4th Quarter:	
May	19			November	33		
June	20		69	December	27		94

The number of cases in the various age periods were as follows:—

Under 1 year ...	1	} Under 5 years—115	5—10 years ...	143
1—2 years ...	6		10—15 „ ...	48
2—3 „ ...	22		15—20 „ ...	11
3—4 „ ...	41		20—35 „ ...	19
4—5 „ ...	45		35—45 „ ...	5

219 cases (64 per cent) were removed to Hospital and 122 were isolated at home. There were 3 deaths, giving a case mortality of 0.88 per cent., as compared with 2.52 in 1933, and a death rate of 0.05 per 1,000 of the population, as compared with 0.14 in 1933 and 0.04 the average for the ten years 1924-33. The corresponding rate in England and Wales in 1934 was 0.02, and in the large towns 0.02.

There were 18 return cases, 15 relating to 14 hospital cases (6.4 per cent. of discharges) discharged from Hospital and 3 relating to 5 home-isolated cases. There were also 33 secondary cases.

### Scarlet Fever and Home Conditions.

Of the 271 ordinary dwellings affected, 60 had less than one person per room, 194 had between one and two persons per room, and 17 had more than two persons per room. 6.3 per cent. of the houses were overcrowded according to the standard of the Registrar-General, as compared with 6.5 per cent. in 1933.

Home	} Under 14 years of age—324 (Susceptibles—294).
Contacts	
	Over 14 years of age—724 (Susceptibles—636).

Amongst the 294 susceptible contacts under 14 years of age, there occurred 15 return cases and 25 secondary cases. Amongst the 636 susceptible contacts over 14 years of age, there occurred 3 return cases and 8 secondary cases.

Houses with Secondary Cases	{	Under 1 person per room ...	5
		1 and up to 2 persons per room ...	22
		More than 2 persons per room ...	2
Houses with Return Cases	{	Under 1 person per room ...	—
		1 and up to 2 persons per room ...	13
		More than 2 persons per room ...	1

### Enteric Fever.

No case of this disease occurred during 1934. During 1933 only one case was notified, and the patient recovered. The average annual attack rate for the ten years 1924-33 was 0.13 per 1,000 of the population, and the average annual death rate was 0.02 per 1,000 of the population.

### Pneumonia.

55 cases of Pneumonia (53 primary and 2 influenza) were notified, 15 in the first quarter of the year, 18 in the second quarter, 9 in the third quarter, and 13 in the fourth quarter. Of the notified cases, 15 died (including 2 non-residents). There were 22 deaths from Pneumonia where the illness had not been notified.

### Dysentery.

12 cases of Dysentery were notified, all patients in the West Riding Mental Hospital. There was one death.

### Measles.

306 cases of Measles (all children under 5 years of age and all first cases in the household within a period of two months) were notified, as compared with 342 in 1933 and 21 in 1932. 24 cases were notified in the first quarter of the year, 189 in the second, 65 in the third, and 28 in the fourth quarter.

In addition, 30 children under 5 years of age and 82 over 5 years of age were notified through the schools, and 135 cases (including second cases and children over 5 years of age) were ascertained otherwise.

There were 2 deaths from Measles, giving a death rate of 0.03 per 1,000 of the population, as compared with 0.07 in 1933 and 0.12 the average for the ten years 1924-33. The immediate causes of death were Convulsions in one case and Broncho-pneumonia in the other,



## Whooping Cough.

27 cases of Whooping Cough were notified (all children under 5 years of age and all first cases in the household within a period of two months), as compared with 31 in 1933. 11 cases were notified in the first quarter of the year, 6 in the second quarter, 10 in the third quarter, and none in the fourth quarter.

In addition, 11 cases were notified through the schools, and 21 were ascertained otherwise. There were no deaths from Whooping Cough, the death rate therefore being nil, as compared with 0.07 in 1933 and 0.09 the average for the ten years 1924-33.

## Cerebro-spinal Fever.

6 cases of Cerebro-spinal Fever were notified during 1934, the particulars of the cases being as follows:—

Date notified.	Sex.	Age.	Home Address.	Where treated.	Whether confirmed Bacteriologically.	Result.
8/3/34	...	M.	6	Eastmoor.	County Hospital	Yes ... Recovered.
17/4/34	...	F.	1½	Alverthorpe Road.	do.	Yes ... Died, 3/5/34.
19/5/34	...	M.	10	Alverthorpe	Clayton Hospital	Yes ... Recovered
29/6/34	...	M.	40	Lupset.	do.	Meningo-coccus not found, but bacteriologist advised that case be treated as Cerebrospinal Fever. Died, 29/6/34.
14/9/34	...	M.	56	Stanley Road.	County Hospital	Yes ... Died, 18/9/34.
17/12/34	...	M.	3	Grange Street.	Municipal Hospital, Snape-thorpe	Yes ... Died, 27/12/34.

## INFECTIOUS DISEASES HOSPITAL.

## Statistics, 1934.

(Old Fever Hospital, Park Lodge Lane, up to 5th September, 1934).

(Municipal Isolation Hospital, Snapethorpe, from 5th September, 1934).

DISEASE.	No. of cases in hospital at beginning of year.	No. of cases admitted.	No. of cases under treatment.	No. of cases discharged.	No. of deaths.	Mortality Percentage.	No. of cases remaining at end of year.
Scarlet Fever	22	219	241	220	2	0.89	19
Diphtheria	27	299	326	239	25*	10.5	62
Diphtheria Carriers	1	5	6	6	—	—	—
Cerebrospinal Fever	—	1	1	—	1	100	—
For Observation	—	2	2	2	—	—	—
Totals	50	526	576	467	28	6.03	81

\* Actually, 24 deaths were due to Diphtheria. In one case, the diagnosis was revised to Acute Septic Tonsillitis, from which the patient died.

The number of admissions was 139 more than in 1933 and 64 less than in 1932. The largest number of patients in Hospital on one day was 89 (Snapethorpe Hospital, December 27th), and the smallest 24 (Park Lane Hospital, August 27th-30th), whilst the average throughout the year was 48.

**Scarlet Fever.**

The maximum daily number of patients was 38 (October), the minimum 11 (August), and the average 21. The maximum period of stay (excluding fatal cases), was 202 days, the minimum 11 days, and the average 32 days. 10 patients were admitted on the 1st day of disease, 73 on the 2nd,

65 on the 3rd, 39 on the 4th, 11 on the 5th, 7 on the 6th, 1 on the 7th, 2 on the 8th, 1 on the 10th, 1 on the 14th, 3 on the 16th, and 1 each on the 17th, 19th, 20th, 22nd, 23rd, and 24th day of disease. In 6 cases, the diagnosis was revised.

Complications occurred as follows:—

	On Admission.	After Admission.
Rhinitis ... ..	17 (7.6%)	23 (10.26%)
Otorrhoea ... ..	2 (0.89%)	16 (7.14%)
Adenitis ... ..	7 (3.12%)	31 (13.8%)
Acute Nephritis ... ..	1 (0.44%)	6 (2.67%)
Tonsillitis ... ..	3 (1.33%)	3 (1.33%)
Diphtheria ... ..	3 (1.33%)	—
Rheumatism ... ..	1 (0.44%)	8 (3.56%)
Endocarditis ... ..	—	1 (0.44%)

### Deaths.

The three deaths were due to Septicæmia in one case, to broncho-pneumonia in the second, and to general exhaustion in the third. Two of the fatal cases, including the second and third, were of the Mongolian type.

### Diphtheria.

The maximum daily number of cases was 68 (December), the minimum 8 (January), and the average 26. Excluding fatal cases, the maximum period of stay was 143 days, the minimum 17 days, and the average 40 days. Of the definite cases admitted, 4 were admitted on the 1st day of disease, 51 on the 2nd, 80 on the 3rd, 63 on the 4th, 33 on the 5th, 16 on the 6th, 5 on the 7th, 5 on the 8th, 5 on the 9th, 2 each on the 10th, 11th, and 12th, and 1 each on the 14th, 15th, 18th, and 20th day of disease. In 27 cases, the diagnosis was revised, and the figures which follow refer to confirmed cases only:—



Complications occurred as follows:—

	On Admission.	After Admission.
Rhinitis ... ..	28 (11.8%)	6 (2.5%)
Adenitis ... ..	60 (25.3%)	10 (4.2%)
Otorrhoea ... ..	—	6 (2.5%)
Albuminuria ... ..	28 (11.8%)	12 (5.1%)
Paralysis ... ..	3 (1.26%)	42 (17.7%)
Hæmorrhage ... ..	8 (3.37%)	—
Vomiting ... ..	10 (4.2%)	6 (2.5%)
Heart complications ... ..	9 (3.79%)	22 (9.28%)

The total amount of antitoxin given was 4,004,000 units, the maximum dose being 80,000 units, the minimum 1,000 units, and the average 16,000 units.

### Relation of Deaths and Recoveries to the Duration of Illness prior to Admission to Hospital.

	1	2	3	4	5	6	7	8	9	10	13	14	15	20
Admitted on: (day of disease)	—	49	80	47	33	12	2	3	3	2	1	2	2	1
Recovered ...	—	48	72	36	30	10	2	3	3	2	1	2	2	1
Died ...	—	1	8	11	3	2	—	—	—	—	—	—	—	—
Mortality per cent. ...	—	2.0	10	23.4	9.1	16.7	—	—	—	—	—	—	—	—

The type of disease was severe. Of the 24 deaths, 16 were directly due to Toxæmia, 5 to Myocarditis, and 3 to Respiratory Paralysis. 7 of the fatal cases were of the hæmorrhagic type.

### Remarks.

The continued epidemics of Diphtheria and Scarlet Fever put a heavy strain on the hospital accommodation and on the Nursing Staff. Fortunately, during June, July, and August, there was a decrease in the prevalence of these diseases, and when we moved into the new hospital on the 5th September, we only had 27 patients to transfer. How-

ever, we had no sooner moved than the prevalence of both diseases went up again, and the increased accommodation now available was pretty fully used up till the end of the year.

I should like once again to express my high appreciation of the devoted and untiring services rendered by the Matron (Miss Peck), the nurses, and other members of the Staff throughout the year, when their work was exceptionally heavy. The Matron had also the additional labour of preparing the new Hospital for occupation, and this itself was no light task.

### **Remarks on Infectious Diseases.**

Diphtheria and Measles were the most prevalent infectious diseases during 1934.

The serious and prolonged epidemic of Diphtheria, which commenced in 1931, continued throughout the year, and became specially severe in the last quarter of the year. Altogether, 308 cases were notified, being 118 more than in 1933. Cases occurred all over the City, but this attack rate was highest in South Westgate, North Westgate, Primrose Hill, and Northgate Wards, and lowest in Calder, St. John's, Belle Vue, and Kirkgate Wards. It is noteworthy that all through the epidemic, Calder Ward has had the lowest attack rate. As usual, the highest incidence was in children between 5 and 10 years (41 per cent.), and next in children between 10 and 15 years (25 per cent.). About 21 per cent. were children under 5 years of age, and about 13 per cent. were persons over 15 years of age. The schools with the highest number of cases were St. Michael's Infants (15), St. Mary's Mixed (15), Lawefield Lane Senior (14), Alverthorpe Church Junior (14), Eastmoor Council (13), St. Austin's Mixed (11), and Snapethorpe Junior (10). With the exception of one school, the cases were spread over the year. In the case of Alverthorpe Church Junior School, 11 of the 14 cases occurred in December, and this was made a matter for special investigation and supervision.

All the patients were removed to Hospital, except 7 who were isolated at home by request, and two who died before they could be removed to Hospital.

We continued to receive the greatest assistance from medical practitioners, who did all they possibly could to ensure early notification, and as this was invariably done by telephone, we were able to remove the patient immediately to Hospital, even if the case was notified during the night, as a good many were. The doctors also took the wise course of sending many cases to Hospital even when the diagnosis was doubtful. As I have pointed out before, such a course is generally in the best interests of the patient, who can secure immediate treatment, and even if the case proves to be non-diphtheritic, the patient, by receiving anti-toxin on admission is protected against infection while in Hospital.

The type of disease was severe, and there were 26 deaths, or 7 more than in 1933. Owing to the larger number of cases, the case mortality (8.4 per cent.) was less than that of 1933 (10 per cent.). All the deaths except two occurred in the Hospital.

It is gratifying to be able to report that at the time of writing, the prevalence of both Diphtheria and Scarlet Fever has substantially abated, and there is reason to hope that the prolonged epidemics have now come to an end.

The Scarlet Fever epidemic, which, like that of Diphtheria, started in 1931, continued throughout the year, and 341 cases were notified, or 23 more than in 1933. The disease was most prevalent in the first and last quarters of the year. Cases occurred all over the City, but the incidence was highest in Primrose Hill and Calder Wards, and lowest in Northgate and Kirkgate Wards. The highest incidence was in children between 5 and 10 years (42 per cent.), and next in children under 5 years (34 per cent.), while 14 per cent. were children between 10 and 15 years, and 10 per cent. persons over 15 years. The schools with the highest incidence were Eastmoor Council (16), St. Mary's Infants (16), Sandal Council Junior (15), Lawefield Lane Infants (12), Thornes Lane Infants (12), and Snape-thorpe Infants (11). In all these schools, the cases were distributed more or less over the year.



64 per cent. of the Scarlet Fever patients were removed to Hospital, as compared with 40 per cent. in the previous year. The increased percentage of cases removed was due to the increased accommodation available in the new Hospital during the last four months of the year.

Notwithstanding the increased number of cases, the mortality was nearly one-third less than that of 1933.

There was a marked reduction in the prevalence of and mortality from Pneumonia, both rates being only half of those of 1933.

Although Measles was epidemic in 1933 (342 notified cases) it continued epidemic in 1934 (306 notified cases).

Notwithstanding the large prevalence of Measles, there were only two deaths.

Whooping Cough was not epidemic during the year, and there was no mortality.

There were 6 cases of Cerebro-spinal Meningitis notified, as compared with 2 in 1933. They were all sporadic cases, spread over the year, and not apparently associated in any way. There were 4 deaths, giving a high case mortality of 67 per cent.

No cases of Smallpox, Acute Anterior Poliomyelitis, Acute Encephalitis Lethargica or Pemphigus Neonatorum were notified during the year.

## THE NEW MUNICIPAL HOSPITAL FOR INFECTIOUS DISEASES.

The outstanding event of the year was the opening of the new Hospital at Snapethorpe, which replaced the old and inadequate Fever Hospital at Park Lodge Lane which had served the City since 1874. The formal opening by the Minister of Health (The Rt. Hon. Sir E. Hilton Young) took place on the 29th June, 1934, but the Hospital actually came into use on 5th September, 1934.

The Hospital was built and equipped by Mr. J. B. Sykes, and presented by him as a free gift to the City.

This remarkable gift, which is probably unique in municipal history, became available at a most opportune time, just when hospital accommodation was sorely needed to cope with the epidemics of diphtheria and scarlet fever. During the preceding few years, our old Hospital had been excessively overcrowded, and at times we had been compelled to seek additional accommodation in hospitals outside the City. We had just moved into our new Hospital, when the prevalence of both diphtheria and scarlet fever rose to a great height, but we were then in the fortunate position of being able to accommodate all the patients in our own Hospital, although at times the large accommodation available was almost fully utilised. And not only were we able to take in the patients, but we were able to provide them with conditions infinitely better and more conducive to recovery than those which we had at our command before.

### **Description of the New Hospital.**

The Hospital is situated at Snapethorpe, adjoining the Lupset Housing Estate, and  $1\frac{1}{2}$  miles from the centre of the City. The site covers about  $1\frac{1}{2}$  acres, has an altitude of 270 feet above sea level, with a gentle slope towards the south-east. There remains ample land available for future extensions. The buildings, which provide accommodation for 93 patients and 42 staff, consist of:—

An Administrative Building and Nurses' Home.

Two 24-bedded Ward Blocks.

One 17-bedded Ward Block with Operation Theatre attached.

One 16-bedded Ward Block.

One 12-bedded Cubicle Block.

One 4-bedded Discharge Block.

One Technical Block.

Medical Officer's House.

Lodge.

Two Houses for Engineer and Ambulance Driver.

The whole of the buildings have been designed by Mr. Louis Ives, the City Surveyor, on the most modern lines, the elevations being of pressed brick, relieved by stone dressings and gauged arches to doors and windows, and the roofs slated. Central heating and electric lighting have been installed, and hot water and steam is supplied to all the buildings. All the buildings are connected by an internal automatic telephone installation, and there is also a wireless installation provided for all the Ward Blocks and administrative Building.

### **The Administrative Building and Nurses' Home.**

This building is centrally situated, and consists of three stories.

#### **Ground Floor.**

Medical Officer's Office, Matron's Office, Matron's Sitting Room, Nurses' Sitting Room, Sisters' Sitting Room, Nurses' Dining Room, Maids' Dining and Sitting Room, Lecture Room, Probationers' Study and Committee Room, Waiting Room, Dispensary, Kitchen, and Stores.

#### **First Floor.**

22 Bedrooms for Matron and Nurses.

#### **Second Floor.**

18 Bedrooms for Maids. Each bedroom has a lavatory basin. Linen stores, sewing room, box rooms, bathrooms, and other sanitary accommodation are provided.

The kitchen is fully equipped for cooking by steam and gas. In addition to the ordinary stores, a refrigerator is provided. Food is conveyed to the Wards in insulated trolleys. The Lecture Room is fully equipped with models and diagrams for the instruction of the probationer nurses.

#### **Ward Blocks.**

All the Ward Blocks (except the Discharge Block) are provided with a covered verandah on the south side, and each also has a recreation room. The 16-bedded Block, intended for advanced cases of Pulmonary Tuberculosis, has two recreation rooms, one for each sex, and the whole of the front of the Wards of this block can be opened widely



to allow of open air treatment. Each 24-bedded Ward Block includes two separation wards, and the 17-bedded Ward Block, one separation room. The 16-bedded Block (Tuberculosis) includes four separation wards.

Each Ward Block is equipped with a steam steriliser for crockery, etc., and an electric cooker in the duty room.

The small Operation Theatre attached to the 17-bedded Ward Block is fully equipped with sterilisers and surgical equipment, and it can also be entered from the outside of this Block.

The Cubicle Block consists of a central duty room and six separation wards on each side. The partition wall between the Wards contains a plate glass panel, 10 feet x 6 feet 6 inches, which allows supervision from the duty room.

The air space per bed provided in the large Wards is 1,728 cubic feet with a 12 feet wall run, and in the separation wards it varies from 1,080 to 1,380 cubic feet. Free ventilation is provided for by window hoppers, and all the large wards are provided with french windows, which open directly on to the verandahs, and permit beds being wheeled out. All the new beds are provided with a wheeling mechanism.

### **The Technical Block.**

The Technical Block includes a boiler house, with two Cornish Steam Boilers, and steam economiser, a power laundry, steam disinfecter, sputum disinfecter, four garages, mortuary with post-mortem room and viewing chamber, laboratory, engineer's workshop, and incinerator. Two motor ambulances and a small motor van are provided.

### **The Grounds.**

The extensive piece of land in front of the administrative and three ward blocks has been laid down in grass, and all the ward blocks have their own lawns. The land to the rear of the buildings will at present be mainly used to grow potatoes and vegetables. Two tennis courts have been provided for the recreation of the staff. A belt of trees has been planted round the site, which is surrounded by a close boarded fence six feet six inches high, and shrubs have been planted and flower beds laid out.

## **Hospital Staff.**

The normal staff of the Hospital includes the Matron, Assistant Matron, Night Sister, three Day Sisters, five staff nurses, ten probationer nurses, cook, laundress, two laundry-maids, kitchenmaids, housemaids, and five wardmaids. The male staff includes the Engineer, Porter, Ambulance Driver, Assistant Porter, and two Gardeners. The Medical Officer of Health himself carries out the duties of Medical Officer of the Hospital.

The Hospital has been approved by the General Nursing Council for England and Wales as a Training School for Fever Nurses, and the necessary lectures, tutorial instruction, etc., have been instituted.

## **Purpose of the Hospital.**

The Hospital, following the trend of modern fever hospitals, is intended to provide accommodation for patients suffering from all notifiable infective diseases (other than smallpox, non-pulmonary tuberculosis, and early cases of pulmonary tuberculosis) who require hospital treatment. The diseases will include Scarlet Fever, Diphtheria, Enteric Fever, Erysipelas, Cerebro-spinal Fever, Acute Encephalitis Lethargica, Acute Anterior Poliomyelitis, Pneumonia, Measles, Whooping Cough, Puerperal Fever, and advanced or observation cases of Pulmonary Tuberculosis. The accommodation of the old Hospital was mainly restricted to Scarlet Fever and Diphtheria, but the increased accommodation of the new Hospital permits a much wider range of diseases to be provided for, although they are all diseases which are notifiable, and therefore come under the direct purview of the Health Department of the Corporation.

Hitherto, many patients affected with these diseases, e.g., Pneumonia, Tuberculosis, etc., have been treated in the County and Clayton Hospitals, and the new Hospital will now help in a small way to relieve these overburdened hospitals.

The accommodation of the new Hospital will have to be adapted to meet the demand as it arises, a demand which will vary from time to time according to the prevalence of the different diseases. It may not always be able to meet



the full demands of an epidemic, but it will always be able to help by admitting those who are in most need of hospital treatment. For example, although cases of Measles or Whooping Cough will be admitted, admission will be restricted to those who urgently need hospital treatment, as it would be quite impossible to admit all and sundry. Our experience with Diphtheria and Scarlet Fever last year has shown that even these two diseases alone may at times utilise all the accommodation of the Hospital, relatively large as it is. It is hoped that the offer of the Hospital to take in pneumonia patients may do something to reduce the high mortality from that disease. It is, however, only likely to do so, if patients come in early. The experience of other hospitals is that pneumonia patients often delay their decision to go into hospital too long, and are not able to benefit by the hospital treatment when they get there. Although Influenzal Pneumonia is a notifiable disease, Influenza itself is not, but all the same, the hospital accommodation might serve a useful purpose by treating cases of that disease during severe epidemics.

Mention has been made about accommodation for advanced and observation cases of pulmonary tuberculosis in the new Hospital, and it should be made clear that the Corporation still retains its accommodation for cases of pulmonary tuberculosis in the earlier stages at the Westmorland Sanatorium, and for cases of non-pulmonary tuberculosis in children at the Kirbymoorside Children's Hospital.

Owing to the epidemics of Scarlet Fever and Diphtheria, it was not possible to admit tuberculosis patients during the year, but at the time of writing this report (April, 1935), the Tuberculosis Block has been opened.

In conclusion, I might point out that not only does the site of the Hospital lend itself to extensions, but that, so far as medical treatment is concerned, the range of diseases treated could be enlarged without difficulty or danger, if the need should arise. The old conception of a fever hospital, expressed in the word "isolation," has been replaced by a much wider one, as is indicated by the great variety of diseases already treated in such hospitals, and the inclusion of other diseases for treatment is only a matter of time.



## ACTIVE IMMUNISATION AGAINST DIPHTHERIA.

*By Dr. Frank Allardice, Deputy Medical Officer of Health.*

There were 78 sessions at the Principal Child Welfare Centre during the year. The Clinic was held twice weekly from the beginning of January until March 10th; thereafter until November 24th, only one weekly session was required. The large response to an appeal by the Medical Officer of Health urging parents to take advantage of the protection afforded by Active Immunisation against Diphtheria made it necessary to arrange twenty-five sessions between November 24th and the end of the year. It was not possible to deal with all the requests for treatment before the end of the year, and 846 were carried forward into 1935.

The total number of persons who attended the Immunisation Clinic was 2,245, 1,634 attending for the first time, and 611 for post-immunisation Schick-testing. The number of attendances registered was 5,544.

The number of completed treatments was 1,119, and there were 420 persons in process of immunisation at the end of the year. A total number of 95 persons failed to complete the treatment, in addition to 100 others who did not keep the appointment made for them on receiving their request for immunisation.

The 1,634 persons attending for the first time were divisible into the following age groups:—

(1)	Under 5 years	...	...	...	444
(2)	Between 5 years and 14 years	...	...	...	1,111
(3)	Over 14 years	...	...	...	79
					<hr/>
	Total	...	...	...	1,634
					<hr/>

The number of preliminary Schick Tests was 1,139. There were 746 positive reactors and 372 negative reactors; 21 of the persons tested failed to attend the following week for ascertainment of the type of reaction. The percentage of positive readings was 66.73, and of negative readings 33.27. The corresponding figures for 1933 were 68.3 and 31.7.

The following details are of interest in connection with the results of the preliminary Schick test:—

- (1) 31 *negative* responses after previous Diphtheria;
- (2) 21 *positive* responses after previous Diphtheria;
- (3) 40 *negative* responses after previous Scarlet Fever;
- (4) 103 *positive* responses after previous Scarlet Fever.

Re-testing for susceptibility to Diphtheria was carried out in 611 persons who had had the full complement of immunising injections. Of that number, 27 failed to attend for the reading of the result of the test. The remaining 584 comprised 567 first re-tests and 17 second re-tests. The latter represented those persons who had not acquired a negative response to the Schick test after the usual number of immunising injections and had required additional prophylactic treatment.

Of the 567 first re-tests, 535 gave negative reactions and 32 were still Schick-positive, the corresponding percentages being 94.36 and 5.64 respectively. These figures represent a further increase in Schick immunes after the ordinary course of injections, compared with 1933, when 88.74 per cent. gave negative reactions, and 11.26 per cent. were still positive. This progressive rise in the number of Schick immunes suggests increasing perfection in the manufacture of the immunising agents, since the technique has remained unaltered and, with the exception of a short period towards the end of 1934, has been carried out by the same medical officer.

A second re-test was carried out in 17 persons, of whom 2 remained Schick-positive and were not again tested before the end of the year.

During 1934, 14 notifications of Diphtheria were made in respect of children who had been either completely or partially immunised. In addition, there were two notifications in respect of children who had been Schick-negative at the time of the preliminary test (and, of course, received no immunising injections); in one an interval of 18 months had elapsed since the test, and in the other, 21 months. In these two cases, the final diagnosis upheld the notification of one, and cancelled it in the other. Of the remaining 14, three had not completed the usual immunising course, and all proved to be instances of mild Diphtheria.



Eleven notifications referred to children who had completed the prophylactic treatment, but only in five instances had this been followed by a Schick re-test. Of the five, three proved to be non-diphtheritic, the other two being mild cases of Diphtheria. The six remaining to be noted provided two final cancellations of the notification of Diphtheria, while four were cases of the disease. Only one of the four cases was classifiable as severe on admission, and it responded to treatment so satisfactorily that there were no complications.

Active Immunisation against Diphtheria is creating new difficulties with regard to the diagnosis of the disease. These are real difficulties and not simply evasions of the issue when a case having a positive bacteriological diagnosis is seen, as has sometimes been suggested by those who are antipathetic to progress in preventive medicine. In arriving at a correct diagnosis when dealing with throat conditions in immunised subjects, the least important of all considerations is the laboratory report on a throat swab. Emphasis must be placed fully and finally on the clinical condition of the patient. It is only by carefully following the course of the disease that the real nature of the case can be elucidated. Cases of clinical Diphtheria do occur in immunised persons, but, to quote from the Medical Research Council's Report (No. 195) on Active Immunisation against Diphtheria, 1934, page 33—

“It is rather an academic than practical question as to how far these cases are Diphtheria *stricto sensu*. According to prejudice, or clinical definition, such cases in Schick immunes and inoculated subjects can be ‘explained away’ or accepted, but their general clinical triviality prevents their use as an argument against the value of artificial active immunisation.”

Dealing with the problem of the immunisation of children under 12 months old, the same Report (page 115) makes clear the risks of excluding them from any comprehensive scheme, and at the same time notes the difficulties of having them included.

“The convention—not to immunise infants during the first year of life—cannot be said to stand on a firm scientific basis. The rule may be the best public health policy in places where the incidence and severity of Diphtheria in the first year of life is almost negligible. But in some epidemics the infants under a year old suffer from Diphtheria to an extent that would seem to make their protection worth while as a public health measure ;



and it is possible . . . . . that, if the newly-born are excluded from an anti-Diphtheria scheme, the incidence and fatality in the 0 to 1 age group will be increased as direct result of the protection of the older children. Therefore, under such circumstances, it seems scarcely justifiable to withhold toxoid from the newly born. The problem, however, bristles with difficulties."

Diphtheria in children under one year is not common in Wakefield, neither have there been rendered immune a sufficiently high percentage of older children to make such a contingency likely, but if, as has already happened in the case of smallpox—in the reverse direction as regards age incidence—Diphtheria will in the future tend to attack progressively lower age-groups, it is a potent argument why the earliest opportunity of securing anti-Diphtheria active immunisation should be seized by every parent. It is definitely wrong to wait for the occurrence of an epidemic of the disease before taking any active steps in the matter of acquiring protection from the disease. Some degree of protection undoubtedly exerts its influence soon after the injection treatment, but unless where universal active immunisation can be practised in the face of an epidemic—that is, in "closed communities"—the risk of epidemic Diphtheria is too great to be contemplated with anything resembling tranquillity of mind.

Diphtheria in Wakefield will continue, at intervals, to be a source of heavy expense and anxiety and a cause of avoidable deaths, so long as the percentage of immunised pre-school children remains below 50. If that, or preferably a higher, percentage could be reached and maintained in this City, the dread of the disease would soon become non-existent, as is now the case with Smallpox.

### Disinfection.

During 1934, the following disinfection work was carried out:—

No. of Houses disinfected		No. of Mattresses	
707			
„ Rooms	1,056	disinfected	626
„ Schools	7	„ Blankets	1,921
„ Classrooms	35	„ Sheets	1,611
„ Times Steam		„ Counterpanes	1,000
Disinfector used	1,159	„ Pillows	1,493
„ Beds disinfected	1,065		

No. of Bolsters		No. of Articles of	
disinfected	748	Women's	
„ Curtains	929	Clothing	1,438
„ Carpets	611	„ Articles of	
„ Rugs	432	Children's	
„ Pairs Boots	728	Clothing	3,179
„ Articles of Men's		„ Miscellaneous	1,118
Clothing	894		

### Pathological and Bacteriological Examinations.

Swabs for B. Diphtheria	1272	Blood } Enteric Fever	11
„ „ „ (Virulence)	29	Fæces }	4
Sputum for B. Tuberculosis	262	Swabs, etc., for	
„ „ „ (Inoculated)	13	organisms ...	79
Pus and Fluids for B. Tuberculosis and other organisms	12	Milk for Bacterial Content	51
„ „ „ (Inoculated)	11	Milk for Tuberculosis (inoculated)	52
Urine for B. Tuberculosis and other organisms	121	Hairs for Ringworm	
„ „ „ (Inoculated)	52	Parasites ...	11
Fluid for Cerebro-Spinal Fever	21	Miscellaneous ...	192
„ „ „ (Inoculated)	1	Examinations in connection with Venereal Diseases:—	
		For detection of	
		Spirochætes	2
		„ „ Gonococci	55
		„ Wassermann	
		Reaction	397
		Other examinations	3

### VACCINATION.

The administration of the Vaccination Acts was taken over by the Corporation (under the Local Government Act, 1929), from the 1st April, 1930. Mr. W. V. Morris (Chief Clerk in the Public Health Department) is Vaccination Officer for the City.

The following Statistics relate to the years 1933 and 1934:—

Year 1933.						Year 1934.	
Number of Births.	Successfully Vaccinated.	Vaccination postponed, or certified as insusceptible of Vaccination.	Died Unvaccinated.	Removed to other districts or places unknown, &c.	Number of declarations of „ conscientious objection.”	Certificates of successful primary Vaccination of Children under 14 received during the year.	Declarations of „ conscientious objection ” received during the year.
993	351	16	51	37	538	326	550

Excluding deaths and removals, 39 per cent. of the children were vaccinated.

As the above figures show, 54 per cent. of the parents made statutory declarations of "Conscientious Objection" to Vaccination.

The Public Vaccinators for the City are as under :—

No. 1 District (the whole of Wakefield, except the Municipal Wards of Belle Vue, Portobello and Sandal).	Dr. J. B. Lyle, Grove House, Kirkgate, and "Broxbourne," Barnsley Road.
--	---

No. 2 District (the Municipal Wards of Belle Vue, Portobello and Sandal).	Dr. D. Downie, "Maybush," Agbrigg Road, Belle Vue.
---	---

County Poor Law Institution, Park Lodge Lane.	Dr. J. W. Thomson, "The Grove," College Grove Road.
---	--

### TUBERCULOSIS.

During 1934, 47 cases of Pulmonary Tuberculosis (30 males and 17 females) and 12 cases of Non-pulmonary Tuberculosis (7 males and 5 females) were notified, but 3 cases (1 male and 2 females) of pulmonary and 1 case (female) of non-pulmonary disease were subsequently cancelled. These numbers include cases notified after death and transfers from other areas. In 1933, the corresponding numbers were 47 and 19. There were 2 cases of pulmonary and 2 of non-pulmonary disease not notified before death. Inquiries showed that in 3 cases the doctors concerned had been under the impression that notification had been carried out, and in the fourth case (Tuberculous Meningitis) the diagnosis was only made at the time of death.

Of the 44 definite pulmonary cases, 16 died before the end of the year. Of the 11 definite cases of non-pulmonary tuberculosis, 3 died before the end of the year.



The 11 definite cases of Non-pulmonary Tuberculosis comprised: Disease of Bones and Joints, 3; Cervical Glands, 3; Meninges, 2; Abdomen, 2; other organs, 1.

**New Cases and Mortality, 1934.**  
(Cancelled Cases excluded).

AGE PERIOD.		NEW CASES.				DEATHS.			
		Pulmonary.		Non-pulmonary		Pulmonary.		Non-pulmonary.	
		M.	F.	M.	F.	M.	F.	M.	F.
0—1 year	...	—	—	1	—	—	—	1	—
1—5 years	...	—	—	1	1	—	—	1	—
5—10	„	—	1	1	1	—	1	—	—
10—15	„	—	—	2	—	—	—	—	—
15—20	„	4	4	1	—	1	1	—	—
20—25	„	3	2	—	1	1	2	—	1
25—35	„	9	4	1	1	8	4	—	1*
35—45	„	5	3	—	—	2	2	—	—
45—55	„	7	—	—	—	8	—	—	—
55—65	„	1	1	—	—	3	1	—	—
65 and upwards	...	—	—	—	—	—	—	—	—
Totals	...	29	15	7	4	23	11	2	2

\* This death was from Cancer.

Of the 34 persons who died from Pulmonary Tuberculosis, 10 (29 per cent.) had previously received sanatorium treatment, and the condition of these on admission to the Sanatorium was as follows:—

Stadium I., Minus T.B.	—	Stadium II., Plus T.B.	6
Stadium I., Plus T.B.	4	Stadium III., Minus T.B.	—
Stadium II., Minus T.B.	—	Stadium III., Plus T.B.	—

The following periods intervened between the date of notification and the date of death in the pulmonary cases:—

Under 1 month	...	6	12—18 months	...	2
1—3 months	...	3	18—24	„	3
3—6	„	5	Over 24	„	7
6—12	„	6	Not notified	...	2

The above table shows that 59 per cent. of the deaths occurred within a year of notification, whilst 6 per cent. had not been notified at all.

### Pulmonary Tuberculosis.

Cases left on the Register on 31st December, 1934:—

Year Notified.	TOTAL.	Males.	Females.	AGE WHEN NOTIFIED.			
				0—15 years.	15—25 years.	25—45 years.	Over 45 years.
1919	1	—	1	—	—	1	—
1920	—	—	—	—	—	—	—
1921	—	—	—	—	—	—	—
1922	1	1	—	—	1	—	—
1923	—	—	—	—	—	—	—
1924	2	1	1	—	1	1	—
1925	—	—	—	—	—	—	—
1926	2	2	—	—	1	—	1
1927	3	1	2	—	1	1	1
1928	5	3	2	—	3	2	—
1929	7	5	2	1	3	1	2
1930	7	5	2	—	2	3	2
1931	11	6	5	2	1	6	2
1932	12	9	3	—	3	9	—
1933	13	8	5	1	6	4	2
1934	27	17	10	—	9	14	4
Totals	91	58	33	4	31	42	14

Condition of the above cases on 31st December, 1934:—

Well and Working ...	26	In other Sanatoria (by private arrangement) ...	3
Well, not Working ...	17	In County Hospital (Poor Law) ...	3
Not Well, Working ...	6	In Clayton (General) Hospital ...	1
Not Well, Not Working	20		
Very Ill, Confined to House ...	6		
In Westmorland Sanatorium ...	9	Total ...	91

**Non-Pulmonary Tuberculosis.**

Cases left on the Register on 31st December, 1934:—

Year Notified.	TOTAL.	Males.	Females.	AGE WHEN NOTIFIED.			
				0—15 years.	15—25 years.	25—45 years.	Over 45 years.
1913	1	—	1	—	—	1	—
1925	1	1	—	1	—	—	—
1926	2	1	1	1	—	1	—
1929	3	2	1	3	—	—	—
1930	5	—	5	3	1	1	—
1931	9	7	2	8	—	—	1
1932	7	5	2	6	1	—	—
1933	10	6	4	6	1	2	1
1934	8	5	3	5	1	2	—
Totals	46	27	19	33	4	7	2

Condition of Cases on 31st December, 1934:—

Well and Working ...	26	In Oswestry	
Well, not Working ...	6	Orthopaedic Hospital	1
Not Well, Working ...	2	In County Hospital	
Not Well, not Working	4	(Poor Law) ...	2
Very Ill, Confined to		In County Poor Law	
House ...	1	Institution ...	1
In Kirbymoorside			—
Hospital ...	3	Total ...	46
			—

**TUBERCULOSIS DISPENSARY.**

During 1934, 103 persons were referred to the Dispensary for examination, and of these, 38 (37 per cent.) were found to be tuberculous, 34 affected with pulmonary, and 4 with non-pulmonary disease.

In addition, 119 contacts were examined, and of these, one was found to be suffering from Pulmonary Tuberculosis.



The following Table shows that of the 35 pulmonary cases, 10 (28.5 per cent.) were in the early stage (Stadium I.), 15 (43 per cent.) were in the moderately advanced stage (Stadium II.), and 10 (28.5 per cent.) were in the more advanced stage (Stadium III.).

	Stadium I.		Stadium II.		Stadium III.	
	T.B. Minus.	T.B. Plus.	T.B. Minus.	T.B. Plus.	T.B. Minus.	T.B. Plus.
Males ...	3	3	1	9	—	8
Females	2	2	—	5	—	2
Totals	5	5	1	14	—	10

The four Non-pulmonary cases comprised disease of:—  
Glands 2, Bones and Joints 1, Kidney 1.

Of the 103 cases who attended the Dispensary, 79 were referred by general medical practitioners, 11 by School Medical Officers, 2 by Maternity and Child Welfare Medical Officers, 2 by Health Visitors, 2 by the Ministry of Pensions, 1 by the Public Assistance Officer, 1 attended voluntarily, and 5 were transferred from other dispensaries.

### Cases of Tuberculosis on the Dispensary Register at the End of 1934:—

<i>Pulmonary Cases.</i>				<i>Non-pulmonary Cases.</i>			
<b>Adults</b>	{	Males	... 54	<b>Adults</b>	{	Males	... 1
		Females	... 31			Females	... 6
<b>Children</b>	{	Males	... 3	<b>Children</b>	{	Males	... 18
		Females	... —			Females	... 8
			—				—
Total			... 88	Total			... 33
			—				—

# PULMONARY TUBERCULOSIS.—SANATORIUM TREATMENT, 1934.

## Westmorland Sanatorium, Meathop, near Grange-over-Sands.

	Total.			Insured.			Non-insured.		
	Total	M.	F.	Total	M.	F.	Total	M.	F.
Remaining end of 1933	10	8	2	9	8	1	1	—	1
Admitted 1934 ...	15	8	7	12	8	4	3	—	3
Total treated 1934 ...	25	16	9	21	16	5	4	—	4
Discharged 1934 ...	14	10	4	12	10	2	2	—	2
Died in Sanatorium ...	2	2	—	2	2	—	—	—	—
Remaining end of 1934 ...	9	4	5	7	4	3	2	—	2

During 1934, 25 patients received sanatorium treatment, as compared with 27 in the previous year. Of these, 21 (84 per cent.) were insured persons.

### Condition on Discharge.

During the year, two patients died in the Sanatorium, and 14 were discharged, and the condition of these on discharge was as follows:—

Condition on Admission.		Condition on Discharge.		
		Quiescent.	Improved.	Not Improved.
Stadium I.	T.B. —	1	1	—
	T.B. +	2	2	1
Stadium II.	T.B. —	—	—	—
	T.B. +	5	1	1
Stadium III.	T.B. —	—	—	—
	T.B. +	—	—	—
Totals		8	4	2

Taking all classes, the immediate result of treatment in the Sanatorium was that 57 per cent. were improved to the extent of apparent quiescence of the disease, 29 per cent. were improved, but not to the same extent, and 14 per cent. were not improved.

Taking the early cases (Stadium I.) by themselves, 43 per cent. were improved to the extent of apparent quiescence of the disease, 43 per cent. were improved but not to the same extent, and 14 per cent. were not improved.

The periods of stay in the Sanatorium were as follows:—

Up to 3 months	...	—	9—12 months	...	...	2
3—6 months	...	4	12—15 „	...	...	—
6—9 „	...	6	15—18 „	...	...	2

### Sanatorium Arrangements.

The Wakefield Corporation continued to use accommodation at the Westmorland Sanatorium, Meathop, near Grange-over-Sands, on the basis of 10 rented beds, with an option on more beds, if required.

## NON-PULMONARY TUBERCULOSIS.

### Institutional Treatment.

	Total.	Yorkshire Children's Orthopædic Hospital, Kirbymoorside.			Heatherwood Hospital, Ascot.			Shropshire Orthopædic Hosp. Oswestry.		
		Total.	M.	F.	Total.	M.	F.	Total.	M.	F.
Remaining end of 1933	5	3	2	1	2	2	—	—	—	—
Admitted 1934 ...	3	2	1	1	—	—	—	1	1	—
Discharged 1934 ...	4	2	1	1	2	2	—	—	—	—
Died 1934 ...	—	—	—	—	—	—	—	—	—	—
Remaining end of 1934	4	3	2	1	—	—	—	1	1	—

The four children discharged were as follows:—

- (1) Female, aged 8 years—Tuberculous right hip.  
In Institution, 5 years. Disease quiescent.
- (2) Male, aged 6 years—Tuberculosis of spine.  
In Institution, 3½ years. Disease quiescent.



- (3) Male, aged 8 years—Tuberculous Hip.  
In Institution, 3 years, 2 months. Disease  
quiescent.
- (4) Male, aged 12 years—Tuberculosis of Right Knee.  
In Institution 25 weeks. Disease quiescent.

### REMARKS ON TUBERCULOSIS.

The administrative work connected with Tuberculosis was carried out on the usual lines. The circumstances of all cases notified are investigated, and continuous supervision is maintained by the Health Visitors so long as the cases remain on the Register. This Register is revised annually, and the names of all cases who have recovered, according to the rules laid down by the Ministry of Health, who have died, or who have left the City, are removed. Printed and verbal instructions as to precautions against the spread of infection are given, and every effort is made to secure compliance with these instructions. Sputum flasks and disinfectant fluid are supplied free, and disinfection of bedding, etc., is carried out as required. The services of the Tuberculosis Officer are available for purposes of diagnosis and advice regarding suitable lines of treatment, either at the Tuberculosis Dispensary or for consultation in the home. Radiological examinations are made at the Clayton Hospital. Contacts are encouraged to attend at the Dispensary for examination. Sanatorium treatment at the Westmorland Sanatorium is available for suitable pulmonary cases, and hospital treatment is likewise available for children suffering from non-pulmonary disease at the Yorkshire Children's Orthopædic Hospital at Kirbymoorside, and elsewhere, as well as locally at the Clayton and County Hospitals. The non-pulmonary group of cases can also have advice and treatment at the Orthopædic and Ultra-violet Ray Clinics of the Corporation.

The only hospital accommodation for advanced cases was at the County Hospital (Poor Law), as the Tuberculosis Block (16 beds) in the new Municipal Hospital was not available during the year, owing to the epidemic of Diphtheria. At the time of writing this report (April, 1935) this new accommodation has become available, and advanced cases have now been admitted.

Generally speaking, the arrangements may be regarded as satisfactory. The great defect of the system continues to be the lateness of notification in a considerable proportion of the pulmonary cases. About 41 per cent. of the deaths from pulmonary disease occurred within six months of notification. If we exclude a few acute cases, running a rapid course, the remainder of these could not be regarded as having much chance of benefiting by treatment. We are, however, doing everything possible to educate the public on the importance of securing early treatment, and periodically a notice regarding this is inserted in the local edition of "Better Health." We are also trying to get a better attendance of contacts at the Dispensary, and the numbers were increased during the year.

It will have already been noted that some eight per cent. of the samples of milk tested bacteriologically were infected with tubercle bacilli, and the importance of securing milk free from tuberculosis, as well as other infections, cannot be too strongly emphasised. This involves the production of milk from Certified for Grade "A" (Tuberculin Tested) herds, or the subjection of ordinary milk to treatment by heat, namely, boiling, or better still, pasteurisation.

### **Care Work in connection with Tuberculosis.**

The Social Service Council has continued to render assistance, particularly in the provision of clothing to necessitous patients about to be admitted to the Sanatorium.

The Corporation itself has directly supplied extra nourishment to several patients, mainly for a period after their discharge from sanatorium. So far as the Health Committee is concerned, extra nourishment is only granted to necessitous patients awaiting admission to, or recently discharged from, the sanatorium, and not to chronic cases with long-standing debility.

The 26 Municipal Houses specially provided for suitable ex-sanatorium patients (20 at Lupset and 6 at Portobello) continued to be occupied during the year, and for the most part with satisfactory results. These houses are each provided with an open air verandah-bedroom for the use of the patient, and are intended for patients whose previous

dwelling-house has not been satisfactory, who have completed a satisfactory course of sanatorium treatment, and who, with the better housing conditions provided, have a reasonable prospect of maintaining their improved condition. The Special Houses enable the patients to continue to live under home conditions approximating to those of the sanatorium.

The six houses on the Portobello Estate have been occupied since 1926. Of the six patients living there at the end of 1934, two have been there since 1926, one since 1928, one since 1929, and two since 1933.

The twenty houses on the Lupset Estate have been occupied since 1929. Of the 18 patients living there at the end of 1934, three have been there since 1929, six since 1930, one since 1931, one since 1932, two since 1933, and five went into the houses during 1934. Of the remaining two houses, the family of a deceased patient was living in one, and the family of a patient who had left the City was living in the other. Altogether, 43 patients have occupied these houses since they were built, and of these, 11 patients have died. At the same time, there would probably have been many more deaths amongst these forty-three, but for the advantages conferred by these Special Houses.

The rents of these houses (12/4d. per week at Portobello and 11/4d. at Lupset, inclusive of rates) have proved a difficulty in many instances, but during the last two years the Health Committee has granted rent assistance in necessitous cases, and this has enabled many families to accept the houses, which otherwise they would not have done. This expenditure is quite properly charged to the treatment of Tuberculosis.



# VENEREAL DISEASES.

## **Treatment of Venereal Diseases at the Venereal Diseases Clinic, Clayton Hospital, Wakefield, 1934.**

(a) Number of Wakefield persons dealt with for the first time and found to be suffering from:—

	Total.	Males.	Females.
Syphilis ... ..	29	18	11
Soft Chancre ... ..	1	1	—
Gonorrhœa ... ..	41	34	7
Conditions other than Venereal ... ..	31	24	7
Total ... ..	102	77	25

(b) Total Number of Attendances at the Out-Patient Clinic:—

	Total.	Males.	Females.
Syphilis ... ..	1065	652	413
Soft Chancre ... ..	2	2	—
Gonorrhœa ... ..	498	288	210
Conditions other than Venereal ... ..	164	103	61
Total ... ..	1729	1045	684

(c) Number of Attendances of Wakefield Patients for irrigation and treatment (not including attendances at Clinic):—

	Total.	Males.	Females.
	2271	1743	528

(d) Aggregate Number of In-patient Days of Wakefield Patients:—

	Total.	Males.	Females.
Syphilis ... ..	47	—	47
Gonorrhœa ... ..	—	—	—
Total ... ..	47	—	47

(e) Number of doses of Arsenobenzol Compounds (N.A.B. and Sulpharsenol) given to Wakefield patients:—576.

### LEEDS GENERAL INFIRMARY VENEREAL DISEASES CLINIC.

During 1934, 3 new patients from Wakefield applied for examination, and 2 were found to be suffering from Venereal Disease (Syphilis, one male and one female). The total attendances were 56 (26 by males and 30 by females), as compared with 137 in 1933. The aggregate number of in-patient days was nil, and the number of doses of arsenobenzol compounds given to Wakefield patients was 18.

### Pathological Examinations in Connection with Venereal Diseases, 1934.

	Total.	For the detection of Spirochaetes.	For the detection of Gonococci.	Wassermann Reaction.	Other Examinations.
County Hall Laboratory ...	457	2	57	397	1
Clayton Hospital Clinic ... ..	244	2	242	—	—
Leeds Infirmary Clinic ... ..	17	—	15	2	—
Total ... ..	718	4	314	399	1

For many years past, the report on Venereal Diseases has been accompanied by most interesting and informative comments, furnished by Dr. A. W. Frew, the Medical Officer for Venereal Diseases to the Clayton Hospital. Unfortunately,

this year I am not able to do so, and I should like to express my deep personal regret at the sudden and untimely death of Dr. Frew, which took place during 1934. Dr. Frew, who for many years was the Medical Officer for Venereal Diseases for the West Riding County Council, had a wide and exceptional experience of his special subject, and spared no pains to keep the level of his work up to the highest modern standards. He devoted himself whole-heartedly to the interests and welfare of his patients, and was always most willing to help his colleagues with his special knowledge and experience.

Since Dr. Frew's death, the work of the Clayton Hospital Clinic has been carried on by Medical Officers from the West Riding Public Health Department, who have well maintained the high standard of work set by Dr. Frew.

Compared with 1933, the new cases attending the Clinic were 16 fewer for Syphilis and 11 fewer for Gonorrhœa. The total attendances at the ordinary Clinic were 269 fewer, and at the Irrigation and Treatment Clinic 725 fewer than in 1933.

## MATERNITY AND CHILD WELFARE.

*By Dr. Jessie Eeles, Medical Officer for Maternity and Child Welfare.*

### **Supervision of Midwives.**

18 Midwives gave notice of their intention to practise in Wakefield during 1934. Of these 5 were on the staff of institutions, 2 owned a Private Maternity Home, 2 were Municipal District Midwives, and 9 were independent midwives in district practice. Of these 9, one left the City soon after sending in the notification. The midwives in district practice were each inspected every 6 months, and all of them were considered to be thoroughly reliable women, and their work to be satisfactory.

### **Medical Help.**

73 Notifications (32.4% of midwives cases) of sending for medical aid were received from midwives in respect of home confinements, 59 related to the mother and 14 to the infant.



*For Mother.*

Ruptured Perineum	...	32	General condition of	
Prolonged labour	...	5	patient—twin labour.	1
Albuminuria	...	2	Medical aid sought by	
Malpresentation	...	4	relatives—baby born	
Antepartum Hæmorrhage	4		before arrival of nurse	1
Post Partum			Offensive Lochia	...
Hæmorrhage	...	1	Rise of Temperature	...
Miscarriage	...	2	Rash (Scabies)	...

*For Infant.*

Inflammation of Eyes	...	6	White Asphyxia	...
Prematurity	...	2	Baby Still-born before	
Pemphigus	...	1	nurse arrived	...
Melæna	...	1	Tongue Tie	...

**Maternity Homes.**

The one Private Maternity Home on the Register was visited during the year, and everything was found to be satisfactory.

**Ante-natal Clinic.**

During 1934 the Ante-natal Clinic was held 3 times weekly at the Maternity Hospital in Blenheim Road. New patients attended on Wednesdays between 10 a.m. and 12 noon, and subsequent visits were paid on Thursdays between 10 a.m. and 12 noon, or on Fridays between 2 p.m. and 5 p.m. The extra session made possible a more complete overhaul of the patient at the first visit than had previously been customary.

During the year, 581 expectant mothers attended—451 new cases and 130 patients who had begun to attend in 1933. 111 of the 581 patients were from outside the City. The total number of attendances was 3,144.

124 cases were referred to the Clinic by midwives, and 40 cases by private doctors. 120 of the midwives cases were referred by the two Municipal district midwives, and only 4 by midwives in private practice. The same routine was carried on as in 1933, and the blood pressure of each patient was taken and recorded at each visit. Patients who failed to keep their appointments were followed up as before.

The age groups of new cases attending the Clinic in 1934 were as follows:—

Age.	Primiparæ.	Multiparæ.
Under 20 years ...	16	4
20 to 25 years ..	77	49
25 to 30 years ..	57	84
30 to 35 years ..	15	77
35 to 40 years ...	4	49
Over 40 years ..	1	17
Total ... ..	170	280

12.6 per cent. of the patients attended for the first time before the 16th week of pregnancy.

16.0 per cent. attended for the first time between the 16th and the 20th week.

30.5 per cent. attended for the first time between the 20th and the 25th week.

24.8 per cent. attended for the first time between the 25th and the 30th week.

13.1 per cent. attended for the first time between the 30th and 35th week.

3.0 per cent. attended for the first time between the 35th and the 40th week.

84.0 per cent. of the patients attending the Clinic had some abnormality or discomfort which required attention. Only 95 out of the total number felt, and were, perfectly well throughout.

The more gross defects already present among these expectant mothers were as follows:—

Heart Disease (Organic)	17	Abnormal Pelvis	... 22
Severe Anæmia	... 2	Congenital Syphilis	... 1
Epilepsy	... 2	Syphilis	... 1
Pulmonary Tuberculosis	4	Gonorrhœa	... 2
Diabetes	... 1	Chronic Nephritis	... 4
Friedreich's Ataxia	... 1		

The following relatively serious conditions developed as a result of the pregnancy, and were attended to:—

Retroflexed Gravid				Malpresentations			
Uterus	...	...	1	Corrected	...	...	31
Antepartum				Pyelitis	...	...	19
Hæmorrhage	...	...	12	Cystitis	...	...	5
Missed Abortion	...	...	2	Toxæmia (slight)	...	...	139
				Toxæmia (severe)	...	...	46

Blood was taken for the Wassermann Reaction in 4 cases, 2 cases were referred from the Ante-natal Clinic to the Venereal Diseases Officer, and two cases were referred to the Ante-natal Clinic from the Venereal Diseases Officer.

Six patients were X-rayed, and the following conditions were found:—

Posterior Position	...	...	...	2
Contracted Pelvis of foetal type	...	...	...	1
Anencephaly and Hydramnios	...	...	...	1
Hydramnios	...	...	...	1
Hydrocephalus	...	...	...	1

76 patients were admitted to the hospital from the Clinic for Ante-natal treatment for the following reasons:—

Toxæmia of Pregnancy	38	Vomiting of Pregnancy	3
Pyelitis	...	Antepartum Hæmorrhage	2
Cystitis	...	Vaginal Discharge	1
Chronic Nephritis	...	Nervous Debility	1
(1 + Heart Disease)		Hyperpiesis alone	1
Heart Disease	...	Breech (for version under	
(1 + Chronic Nephritis)	7	anæsthetic)	...
			...

### Dental Treatment of Expectant Mothers.

During the year 15 Sessions were held, 34 patients received treatment, and 48 attendances were made. In the great majority of cases the only possible line of treatment to adopt is that of extraction to eradicate sepsis, preceded by a cleansing of the mouth to assist subsequent healing. There were 133 extractions, 100 being done under local anæsthesia at the Dental Clinic and 33 under general anæsthesia at the Maternity Hospital. Fillings totalled 6, and other operations 15. One full upper and lower denture was completed.



Owing to the necessity for waiting until there are sufficient applicants to make holding a session worth while, an applicant may have to wait two or three weeks for treatment. This may partly account for the large number of broken appointments, 38 during the year, 36 being first appointments.

### The Maternity Hospital.

The number of cases admitted during 1934 was 343, including 73 from outside the City. Out of the total, 19 were emergency cases, 15 from Wakefield and 4 from outlying districts. 319 patients were delivered in hospital, and in 305 cases the actual delivery was done by a midwife, though, of course, in many of these cases medical treatment had previously been required for an abnormality.

The average duration of stay per patient was 17.05 days.

In the following cases medical treatment was required for some abnormality :—

#### (a) Ante-natal—85.

Toxæmia	...	...	43	Vomiting	...	...	3
Eclampsia	...	...	1	Antepartum Hæmorrhage	...	...	3
Pyelitis	...	...	19	Vaginal Discharge	...	...	1
Cystitis	...	...	1	Nervous Debility	...	...	1
Chronic Nephritis	...	...	4	Hyperpiesis	...	...	1
Heart Disease	...	...	7	Breech (for version)	...	...	1

#### (b) During Labour—37.

Antepartum Hæmorrhage :—				Hydramnios	...	...	1
Accidental	...	...	5	Eclampsia	...	...	1
Placenta Prævia	...	...	3	Toxæmia	...	...	1
Extended Breech	...	...	7	Foetal Heart absent	...	...	5
Face Presenting...	...	...	1	Failed Forceps	...	...	1
Transverse Lie	...	...	1	Foetal Distress	...	...	1
Prolapse of Cord	...	...	2	Uterine Inertia	...	...	5
Multiple Presentation				Adherent Placenta	...	...	2
(head, hand and foot)			1				

**(c) After Labour—37.**

Pyelitis ... ..	9	Chronic Nephritis and	
Cystitis ... ..	1	Epilepsy ... ..	1
Mastitis ... ..	4	Epilepsy ... ..	1
Boil on Breast ... ..	1	Bartholinian Cyst and	
Bronchitis ... ..	2	Retention of Urine ...	1
Cellulitis of Leg ... ..	1	Embolism ... ..	1
Phlebitis ... ..	1	Diarrhœa ... ..	1
Tonsillitis ... ..	1	Puerperal Fever ... ..	4
Peritonsillar Abscess ...	1	Pyrexia (not included in	
Albuminuria ... ..	2	above) ... ..	5

**(d) For the Infant—20.**

Melæna ... ..	2	Asphyxia Neonatorum ...	1
Cyst in Lachrymal Sac ...	1	Ophthalmia ... ..	1
Blueness and difficult		Mongol ... ..	1
Breathing ... ..	1	Slight Discharge from	
Spina Bifida ... ..	2	Eyes ... ..	4
Dangerous Feebleness ...	7		

71 patients required to have the perineum sutured.

Instrumental delivery was required in only 8 cases, i.e., 2.5 per cent. of the total. The reasons for interference were as follows:—

Uterine Inertia ... ..	4
Uterine Inertia and Foetal Distress ... ..	1
Prolapsed Cord ... ..	1
Face Presentation ... ..	1
Failed Forceps at home (2nd twin) ... ..	1

Cæsarean section was performed 6 times (i.e., 1.9 per cent.) and for the following reasons:—

Placenta Prævia ... ..	2
Hydrocephalus ... ..	1
Chronic Nephritis (Cæsarean at 34th week) ...	1
Foetal Type of Pelvis ... ..	1
Small Pelvis and Severe Toxæmia ... ..	1

The following cases required other forms of operative treatment:—

Induction of premature labour ... ..	2
External version under general anæsthetic ...	1
Internal Version ... ..	1

Replacement of foot and hand presenting alongside head	...	...	...	...	1
Incision of breast abscesses	...	...	...	...	1
Manual removal of adherent placenta	...	...	...	...	2
Bipolar podalic version	...	...	...	...	1

Four cases were notified as Puerperal Fever. These were all transferred to the Clayton Hospital. Three recovered, and one died.

Eight cases were notified as Puerperal Pyrexia. The following were the causes:—

Stitch abscess in Caesarean Section wound...	1					
Gonorrhoea	...	...	...	...	...	1
Pyelitis	...	...	...	...	...	3
Doubtful	...	...	...	...	...	2
Pelvic Cellulitis	...	...	...	...	...	1

Five of these cases were treated in the Maternity Hospital and recovered.

Three went home to the care of their own doctor, but two of them were eventually sent into the Clayton Hospital. Both recovered.

There were no cases of Pemphigus Neonatorum in the Hospital in 1934.

There was one case of Ophthalmia Neonatorum due to the gonococcus. It was treated in the Maternity Hospital, and was discharged cured.

There were 19 still-births and 7 infant deaths within 10 days of birth. The causes of death were these:—

Prematurity (1 twin, 1 not viable)	...	4
Multiple congenital abnormalities	...	1
Hydrocephalus and Spina Bifida	...	1
Cerebral Hæmorrhage (normal delivery)	...	1

Out of the total number of foetal deaths (including still-births) no fewer than 7 were due to gross malformation of the foetus.

The average duration of stay of patients in hospital was 17.05 days.



### Training of Pupil Midwives.

During 1934, 10 new pupils commenced their training for the certificate of the Central Midwives Board. 6 passed the examination of the Board during the year. The pupils attend lectures at the Leeds Medical School, and receive tutorial and practical instruction from the Matron and the Sister of the Hospital.

### District Cases.

137 home confinements were attended in 1934 by the two Municipal Midwives, assisted by the pupil midwives. 21 of these were doctors' cases. Each pupil has to spend a month of her training doing district work, and in this way gain experience of home midwifery.

### Post Natal Clinic.

The Post Natal Clinic was held weekly throughout the year, the patients being seen on Wednesdays at 10 a.m., along with the new ante-natal cases. As in previous years the patients attending are chiefly those who have been confined in the hospital. They are asked to report at the end of the sixth week of the puerperium, whether the confinement has been normal or otherwise. In addition, patients complaining of any form of gynæcological trouble are sent from Welfare Centres to be examined and referred for suitable treatment.

During 1934, 201 patients attended, and the attendances numbered 237.

Of the 201 patients, 181 had been delivered in hospital, 4 were sent by their doctors, 8 were referred from Welfare Centres, and 8 came of their own accord.

The following abnormal pelvic conditions were found:—

Ovarian Cyst ... ..	2	Perineal Deficiency (2+	
Prolapsed Ovary ... ..	1	Split Cervix) ... ..	3
Salpingitis (one chronic		Pruritus ... ..	2
one sub-acute) ... ..	2	Old-standing Gonorrhœa	1
Subinvolution ... ..	2	Vulvar Papillomata ... ..	1
Lacerated Cervix (2+		Metrorrhagia ... ..	3
perineal deficiency) .	3	Dysmenorrhœa ... ..	2
Retroflexed Uterus ... ..	3		

Other abnormalities found were these:—

Constipation ... ..	7	Heart Cases ... ..	3
Fissure in Ano ... ..	3	Varicose Veins	
Hæmorrhoids ... ..	4	(1+ Phlebitis ... ..	2
Sciatica ... ..	1	Mastitis ... ..	1
Sacro Iliac Strain ... ..	1	Old Cæsarean Section	
Backache ... ..	2	Cases ... ..	4
Cystitis ... ..	7	Rheumatism ... ..	1
Albuminuria ... ..	2	Chronic Appendicitis ...	1
Raised B.P. (2+ albuminuria above).	8	Anæmia ... ..	3
Chronic Nephritis (old standing) ... ..	3	Pulmonary Tuberculosis	2
Hodgkins Disease ... ..	1	Cough ... ..	1
Pernicious Anæmia ... ..	1	Defective Vision and	
Right Inguinal Hernia. ... ..	1	Headache ... ..	1
Stone in Kidney ... ..	1	Habitual Miscarriage ...	1
Cardiac Irregularity and Enlarged Thyroid	1	Advice re baby ... ..	4
		Epilepsy ... ..	1

57 patients who had had toxæmia of pregnancy attended the post-natal clinic. Only 2 of these had albumen in the urine and 8, including these two, still had blood pressures of 140/90 or over. Some of these are still being followed up, so that the end results cannot yet be given.

### Remarks on the Maternity Hospital.

The number of admissions were 36 fewer than in 1933. This was due to the closing of the hospital from 17th July till 13th August, on account of infective troubles. There had been 2 cases of notifiable pyrexia in April, 2 more cases and 1 of Fever in June, and in July 3 cases of Pyrexia and 3 cases of Fever. It was then obvious that the best course was to close the hospital for a period, and during this time the Wards were thoroughly disinfected and the Labour Ward repainted as well. A bacteriological examination of the throats and noses of the staff was carried out, and one was found to be a carrier of the *Streptococcus Hæmolyticus*. After re-opening no further cases of puerperal fever or pyrexia occurred during the rest of the year.

The year has been rather a trying one for both the medical and nursing staff, and great credit is due to the Matron (Miss Perkins) and her staff for their able and unwearying services under somewhat difficult circumstances.

### Puerperal Fever and Puerperal Pyrexia.

During 1934, 19 cases were notified under the regulations, 12 being cases of Pyrexia and 7 cases of Puerperal Sepsis. Of the 12 cases of Pyrexia, 8 were originally attended by midwives and 4 by doctors assisted by midwives. 8 of the Pyrexia cases were notified from the Maternity Hospital, one from the County Hospital, and 3 from the patients' own home. Six cases were treated in the Maternity Hospital, two were treated in the Maternity Hospital and were later admitted to the Clayton Hospital, one was treated in the County Hospital, and three were treated at home. All recovered.

Inquiries into the cause of the Pyrexia gave the following results:—

Influenza ... ..	1	Breast Abscess ... ..	1
Urinary Infection ...	5	Doubtful ... ..	2
Gonorrhœa ... ..	1	Pelvic Cellulitis ... ..	1
Stitch Abscess in Cæsarean Section Wound ... ..	1		

Of the 7 cases of sepsis, 4 were originally attended by midwives, and 3 of these were actually delivered by midwives. One was delivered by a doctor and a handywoman, 3 were delivered by doctors assisted by midwives. Two arose in Clayton Hospital, 4 in the Maternity Hospital, and one at home.

Six cases were treated in Clayton Hospital and one at home. Two of these patients died, one Clayton Hospital case and one Maternity Hospital case, the latter not being a Wakefield resident. The others recovered completely. In addition to the above, there were three deaths from Sepsis among Wakefield residents, one notified in 1933 (a home confinement), one case of post abortive sepsis not notified, and one case confined and notified outside the City, and sent into Clayton Hospital for treatment.

### Ophthalmia Neonatorum.

Six cases of Ophthalmia Neonatorum were notified during 1934, i.e., 0.62 per cent. of the notified live births. Two cases were notified in 1933, 7 in 1932, 8 in 1931, 6 in 1930, 10 in 1929, and 16 in 1928.

Cases Notified.	Treated.		Vision Un- impaired.	Vision Impaired.	Total Blind- ness.	Deaths.
	At Home.	In Hospital.				
6	3	3	4	2	—	—



One case was notified from the Maternity Hospital and 5 from homes. Two cases were delivered by midwives, 2 by a doctor assisted by a midwife, and 2 by a doctor assisted by a handywoman. In two cases the gonococcus was proved to be the cause of the disease. One of these (treated in the Maternity Hospital) recovered completely. The other recovered with a scar on one cornea. The second case with impaired vision was not proved to be due to the gonococcus.

### **Pemphigus Neonatorum.**

No case of this disease was notified during 1934.

### HOME VISITING BY HEALTH VISITORS.

The six district Health Visitors, who also act as School Nurses and Tuberculosis Nurses, carried out the following work during the year:—

Infant Visiting—Primary Visits	...	...	...	915
Re-visits (under 1 year)	...	...	...	7,895
Re-visits (1—5 years)	...	...	...	7,899
Total Visits				16,709
<hr/>				
Expectant Mothers—Primary Visits	...	...	...	251
Re-visits	...	...	...	536
Visits re Still-births and Infantile Deaths	...	...	...	34
Attendances at Child Welfare Centres	...	...	...	290
Attendances at Tuberculosis Dispensary	...	...	...	102
Visits to Tuberculosis Patients	...	...	...	936
Attendances at Medical Inspection of School Children	...	...	...	199
Number of Visits to Schools	...	...	...	624
Number of Examinations at Schools re Cleanliness	...	...	...	11,842
Number of Examinations at Schools re Treatment	...	...	...	1,977
				<hr/>
Number of Home Visits re Contagious Diseases	...	...	...	1,073
Number of Home Visits re Verminous and Neglected Children	...	...	...	46
Number of Homes Visited for other purposes	...	...	...	638
				<hr/>
Total Number of Homes Visited re School Children	...	...	...	1,757
				<hr/>

Number of Homes Visited re Mental Defectives ...	568
Visits for Purposes of Nursing ... ..	119
Miscellaneous Visits ... ..	364
Total Number of Home Visits (all purposes) ...	21,274

### Infant Life Protection.

The Health Visitors act as Visitors under Part 1 of the Children's Act (1908). There were 4 children on the Register at the beginning of the year, one new case was added during the year making a total of five cases at the end of the year. All the children were satisfactorily cared for.

### CHILD WELFARE CENTRES. Numbers on the Registers, 1934.

Centres.	Mothers.	Infants.	Children 1—5 yrs.	Expectant Mothers.
Principal Child Welfare Centre:				
Miss Bell's District ...	232	170	120	20
Miss Staniforth's District	275	189	140	12
Miss Gardner's District	206	158	79	—
Miss Robertshaw's Dis.	256	174	110	15
Belle Vue Centre ... (Miss Thorp)	224	228	94	27
Snapethorpe Centre ... (Miss Dearden)	354	317	198	5
Totals ...	1547	1236	741	79

*Attendances.*

Centres.	Mothers.	Infants.	Children 1—5 yrs.	Expectant Mothers.
Principal Child Welfare Centre:				
Miss Bell's District ...	2216	1742	745	86
Miss Staniforth's District	2669	1468	1306	21
Miss Gardner's District	1925	1614	234	—
Miss Robertshaw's Dis.	2985	2081	1157	61
Belle Vue Centre ... (Miss Thorp)	2134	1704	804	10
Snapethorpe Centre ... (Miss Dearden)	2891	2148	946	30
Totals ...	14820	10757	5192	208

As in 1933, Centres were held at the Principal Child Welfare Centre on four afternoons each week—Mondays, Tuesdays, Wednesdays, and Thursdays—at Belle Vue once a week on Tuesday afternoon, and at Snapethorpe on Wednesday afternoon.

During 1934, 1,373 infants and 194 mothers were medically examined at the Centres. Of the infants, 886 (i.e., 64.5 per cent.) were found to be normal and satisfactory at the first attendance, while 487 had some defect or ailment requiring supervision or treatment. The total number of medical examinations made was 9,581 (8,924 children and 657 mothers). All the infants attending the Centres are medically examined at least once a month, and more often, of course, when necessary. The Voluntary Helpers from the Babies Welcome Association have continued to give their valued assistance in the running of the Centres.

During the summer of 1934, 20 debilitated mothers and 21 babies were sent at the Corporation's expense for a fortnight's holiday to the Yorkshire Home for Mothers and Babies at Withernsea. All the mothers benefited greatly from the holiday.



## INFANT FEEDING.—Infants Born in 1933.

	Infants born 1933.	Percentage.
Wholly breast fed for 6 months or longer ... ..	641	84.78
Wholly breast fed for periods less than 6 months, but more than 1 month ... ..	61	8.06
Combined breast and artificial feeding for periods of 6 months or longer ... ..	23	3.04
Combined breast and artificial feeding for periods of less than 6 months, but more than one month ... ..	22	2.91
Artificially fed from 1 month or earlier ... ..	9	1.21
Totals ...	756	100.00

## SUPPLY OF DRIED MILK, 1934.

Sold at Cost Price	...	...	2,553 lbs.
Sold at Half Price	...	...	933 „
Sold at Quarter Price	...	...	2,312 „
Supplied Free	...	...	15,345 „

Total ... 21,143 lbs.

The amount of Dried Milk supplied in 1934 is more than that supplied in 1933 by 1,873 pounds, the increase is accounted for by the number of pounds given free, and the number sold at half price being more than the previous year. The cost to the Corporation for Dried Milk, free or sold at less than cost price, amounted to £665 18s. 3d.

187 packets of Lactogol were also given out during the year, 46 being sold at cost price, 8 sold at half price, 3 sold at quarter price, and 130 given free.

## VITAMINS A. &amp; D. IN PREGNANCY.

**Report on a Local Investigation.**

As an aid in the battle against Puerperal Morbidity, Vitamin A has been strongly recommended by many authorities, and it has become the custom at many Ante-natal Clinics to supply expectant mothers with preparations containing Vitamin A along with Vitamin D to be taken throughout the last month or more of pregnancy. In addition to their value in reducing the amount of sepsis and pyrexia during the puerperium, these substances are regarded by some as having a stimulating effect on the secretion of breast-milk. Also some eminent people hold the view that toxæmia of pregnancy is a vitamin deficiency condition, and it has been suggested that the giving of these vitamins should reduce the amount of toxæmia in pregnant mothers.

If these opinions were all correct, then obviously it would be well worth the cost to any local authority to supply its expectant mothers with some preparation containing these vitamins. In order to test these claims for ourselves a short experiment was made in Wakefield, and was completed during 1934. 200 mothers who intended to come into the Maternity Hospital for confinement were selected quite impartially as they came to the ante-natal clinic. Alternate patients in this batch of 200 were given a good standard preparation of Vitamin A and D, one dose to be taken three times a day during the last month of pregnancy. The other 100 mothers acted as controls. Naturally one had to add to those numbers a little when it came towards the end of the experiment to allow for one or two still-births, or abnormal foetuses and so on.

Actually the number of mothers receiving the extra vitamins was 104, and the number of controls was 102. The numbers of breast-fed babies belonging to these mothers were 101 and 103 respectively. There were twins in both series.

To estimate the effect on the breast milk the birth weight of each baby was taken and balanced against its weight at the end of 14 days. This revealed either a gain of a few ounces or a loss. The total amount gained in each series was balanced against the total weight lost and the total gain in weight above birthweight for each series was thus arrived at.

The results were as follows:—The 101 babies whose mothers had had the Vitamin preparation showed among them an increase of 48 ounces over their birthweight. The 103 babies whose mothers had not had any extra treatment of this kind showed an increase of 50 ounces. 9 babies in each series had to have complementary feeds.

With regard to toxæmia of pregnancy the results are much the same, 14 mothers who had extra vitamins supplied in this way showed toxæmic symptoms, and 15 of those who had had no special prophylactic treatment of this sort did likewise.

Nor are the results with regard to the puerperium any more determinate, 94 of the mothers who took the Vitamin preparation had a completely normal afebrile puerperium, 5 had cystitis with a very slight rise of temperature, and 5 others had a rise of temperature to 99°F or over for no apparent cause. None of these were at all serious cases. 3 patients who had afebrile puerperia had pathological conditions present which usually cause a rise of temperature. Two of these had pus in the urine, and one had a slight mastitis.

The results in the case of the series who did not have the extra vitamin were as follows:—

96 had completely afebrile puerperia.

3 had cystitis with a slight rise of temperature.

3 had rises to 99°F or over without apparent cause.

None of these 3 were at all serious.

Two patients had pathological conditions present without a rise of temperature. Both were cases with pus in the urine and symptoms of cystitis.

Although this experiment is a short one and the numbers are small, the conclusion one is forced to come to is that Vitamins A & D, which undoubtedly have their sphere of usefulness in the prevention and treatment of some diseases, are not by themselves so valuable in pregnancy as one had been led to hope. They do not appear to solve the problem of puerperal pyrexia or of toxæmia, and their effect on the breast milk does not appear to be great. With such doubtful results one could not hope to persuade any Committee to continue what is after all a very expensive form of prophylactic treatment.

JESSIE EELES.



## MATERNAL MORTALITY.

Wakefield is unfortunately one of the many districts in the Country with a high Maternal Mortality. This subject was specially reported on by Dr. Eeles and myself at the end of 1934, and the reports were considered by the Mental and Child Welfare Committee early in 1935. The question is also at present being made the subject of a detailed investigation by the Ministry of Health.

The following are some of the main points relating to Maternal Mortality in Wakefield extracted from the special report referred to:—

Period.	WAKEFIELD.		ENGLAND AND WALES.	
	Average Rate per 1,000 live Births.		Average Rate per 1,000 live Births.	
	Total.	Sepsis only.	Total.	Sepsis only.
1904-1913	4.22	2.17	3.86	1.36 (1911-13)
1914-1923	5.37	2.00	4.04	1.45
1924-1933	5.42	1.52	4.22	1.67
Average Rate 1904-1933	5.00	1.90	4.04	1.49 (1911-33)

During the last 30 years, the maternal mortality in Wakefield has increased from 4.22 per 1,000 live births in the first decade, to 5.37 in the second decade, and to 5.42 in the third decade. Comparing the average of the third decade with that of the first, the increase is equal to 1.2 per 1,000 live births, or an increase of 28 per cent. The excess of the third decade over the second is, however, very small, and only equal to 0.05 per 1,000 live births. If, however, we compare the average of the second half of the third decade (1929-33) with the first half (1924-1928) we find that the average mortality of the former is 7.11 per 1,000 live births, and that of the latter is 3.72 per 1,000

births. In other words, the excess mortality of the last 5 years, as compared with the preceding 5 years, is equal to a rate of 3.39 per 1000, live births, or an increase of 91 per cent. In other words, the mortality has nearly doubled itself within the last 10 years.

If next we compare the Wakefield mortality with that of England and Wales in each of these three decades, we find that in the first decade, the Wakefield mortality exceeded that of England and Wales by only 0.36 per 1,000 live births, in the second by 1.33, and in the third by 1.20.

During the 30 years, the maternal mortality of England and Wales had increased from an average of 3.86 in the first decade, to 4.04 in the second, and 4.22 in the third. Comparing the third decade with the first, the increase is equal to 9 per cent., as compared with an average of 28 per cent. in Wakefield.

The increase of the mortality rate in England and Wales during the second half of the third decade over that of the first half was very small (0.19 per 1,000 births) and nothing like the marked increase in Wakefield during the same period.

It is interesting to note that while the total maternal mortality in Wakefield has increased, that part of it due to Sepsis has decreased, and in the third decade it was actually lower than that of England and Wales. Comparing the third decade with the first, the mortality from Puerperal Sepsis in Wakefield has declined by 30 per cent., while in England and Wales it has increased by 23 per cent. The percentage of Wakefield maternal deaths due to Sepsis (excluding abortions) was 45 in the first decade, 35 in the second, and 19 in the third.

The Wakefield figures also show a decline in the deaths from Puerperal Albuminuria and Eclampsia, the rate from these conditions falling from 0.73 per 1,000 live births in the first decade to 0.40 in the third.

The mortality from ectopic gestation has not materially altered during the 30 years, and although there were no deaths certified from this cause in the first decade, there were two in the second, and one in the third,

Turning now to the diseases and accidents of pregnancy, etc., in which there has been an increase during the last 30 years, we find these to be those classed as “(1) Other Diseases and Accidents of Childbirth,” “(2) Puerperal Hæmorrhage,” “(3) Puerperal Embolism,” “(4) Other Diseases of Pregnancy,” “(5) Abortions.”

### Other Diseases and Accidents of Childbirth.

This class includes 3 deaths (0.27 per 1,000 live births) in the first decade, 5 deaths (0.47) in the second decade, and 9 deaths (0.90) in the third decade. This class represented 6 per cent. of the Maternal deaths in the first decade, 9 per cent. in the second, and 19 per cent. in the third. There has, therefore, been a notable increase, particularly in the third decade, in deaths from the various conditions included in this class. To give some idea of the conditions included, I give below a summary of the causes of death as certified during the 30 years:—

Obstructed or Difficult Labour	...	...	...	5 deaths
Obstructed or Difficult Labour with Cæsarean Section	...	...	...	3 „
Contracted Pelvis with Cæsarean Section	...	...	...	2 „
Cæsarean Section	...	...	...	3 „
Rupture of Uterus	...	...	...	2 „
Inversion of Uterus	...	...	...	1 „
Acute Mastitis and Cerebral Embolism (Parturition)	...	...	...	1 „
Total				17 deaths

Cæsarean Section is stated on the death certificate once in the first decade, once in the second, and 6 times in the third.

**Deaths from Puerperal Hæmorrhage** have also increased. There were 4 deaths from this cause (0.37) in the first decade, 9 (0.84) in the second, and 10 (1.0) in the third. Puerperal Hæmorrhage accounted for 8.5 per cent. of the deaths in the first decade, 16 per cent. in the second decade, and 19 per cent. in the third. The increase was mainly due to placenta prævia, from which 1 death occurred in the first decade, 2 in the second, and 8 in the third.



**Puerperal Embolism** has also caused an increasing number of deaths.

There were 2 deaths (0.18 per 1,000 live births) in the first decade, 2 deaths (0.19) in the second decade, and 8 deaths (0.80) in the third. Puerperal Embolism accounted for 4.2 per cent. of the deaths in the first decade, 3.5 per cent. in the second decade and 15 per cent. in the third. In 5 deaths, the certificate stated the primary cause of the embolism to be Phlegmasia Alba Dolens or other thrombosis, in one death Cæsarean Section was stated, and the other six were simply stated to be puerperal. Phlegmasia Alba Dolens itself was only once given as a cause of death, and that was in the second decade.

**Deaths due to Abortion** have also increased. There were 6 deaths (0.55 per 1,000 live births) in the first decade, 5 deaths (0.44) in the second, and 7 (0.70) in the third. Abortions constituted 13 per cent. of the mortality in the first decade, 9 per cent. in the second, and again 13 per cent. in the third.

Of the 18 deaths, 10 were immediately due to Sepsis, 5 to Hæmorrhage, and 3 to other causes.

There were no deaths classified under the heading of "Other Accidents of Pregnancy" during the first and second decades, but two deaths (both from Hyperemesis) occurred during the third decade.

It was found that there was during the third decade an increased proportion of deaths amongst women over 35 years, and it is well known that confinements occurring during the later years of the child bearing period are more likely to be difficult than those occurring in the earlier years. It would appear that the middle and upper sections of the working class, and the lower section of the middle class suffered most. A very small proportion of the women who died belonged to the class living in the lowest and least sanitary type of dwelling-house, and poverty did not appear to be a factor of much importance.

The Report gave a full account of the development and present extent of Maternity work in Wakefield, and pointed out that the Corporation in its new sphere had spared no pains or money in providing Wakefield with an efficient Maternity Service, and makes the following comments:—

1. It appears paradoxical and is certainly disconcerting to find, as we do in Wakefield, that all our efforts to promote Maternal welfare have been accompanied by an increased maternal mortality. In the first of the decades under review, when the average maternal mortality was just over 4 per 1,000, little or nothing was being done by the local authority to promote maternal welfare. It is true that the first Midwives Act had been passed in 1902, and that local authorities were exercising some supervision over the midwives. That was about all. All the midwives in Wakefield were untrained. No ante-natal work was done, and there was no Maternity Hospital. In the next decade, trained midwives were coming on the scene, and the old "bona-fides" were diminishing. An Ante-natal Clinic had been started, and about the middle of the decade the Maternity Hospital was opened. But the Maternal Mortality had now gone up to over 5 per 1,000. In the third decade the measures calculated to reduce maternal mortality were extended, a medical officer for maternity and child welfare had been appointed, the ante-natal clinic work had been extended, and all the practising midwives were now trained women. But the average maternal mortality had not been reduced. It was a little higher than it was in the preceding decade, and this was due to very high rates in the last half of the decade.

2. It is very difficult to explain this extraordinary state of affairs. The Corporation has done everything in its power to promote maternal welfare. The medical practitioners service in Wakefield is certainly up to and probably above the average for the whole country. All our midwives are trained, and we know that they do their work as well as possible.

3. No doubt certain factors have contributed each in a small way, but more considerably in the aggregate, to raise the mortality, e.g., more accurate certification, an increasing proportion of primiparæ, a rise in the average age of the mothers, and probably more frequent attempts to procure abortion,



Still, these factors are more or less common to the whole country, and would not explain the local excess.

4. It may be, as Dr. Eeles suggests, that the physical condition of the women themselves largely explains their liability to fatal complications during childbirth. Rickets, for example, is a common cause of contraction and deformity of the pelvic bones, which itself is a common cause of serious difficulty at childbirth. Rickets, although not so common now in its gross forms, was very common in Wakefield when many of the women, who to-day are of childbearing age, were born.

5. Again, it is not altogether fantastic to suggest that there may be secular fluctuations in maternal mortality, not unlike epidemics of infectious disease, and like epidemics affecting different districts at different times.

6. I have perused all the reports on the maternal deaths which have occurred in Wakefield during the last 5 or 6 years, and with very few exceptions, I have found it difficult to lay my finger on anything done or not done which would fully explain the fatal issue. There is popular belief that a maternal death means neglect. I could find very little evidence of neglect, and if there was any, it was just as often the neglect of the woman herself as of the attendant. There may have been errors of judgment or technique, but these do not constitute neglect, and errors of this kind, while they may be reduced, will probably never be eliminated. Everything possible should be done to reduce maternal mortality, but it can never be reduced to zero.

7. The main causes of our maternal mortality are now Sepsis, and Accidents of Childbirth, including Hæmorrhage.

Sepsis has been reduced, but is still considerable. Apart from auto-infection, which certainly does occur, sepsis can largely be prevented by strict antiseptic and other precautions, all within the competency of general medical practitioners and trained midwives. The Accidents of Childbirth present a more formidable problem, and after much consideration, I have come to the conclusion that the only way to reduce their mortality is by the extended use of the assistance of doctors specially experienced in obstetrics, who



would advise on any abnormality found ante-natally, and who would supervise every labour where difficulty was anticipated or where some unforeseen difficulty had arisen. The real value of a specialist's assistance is at the beginning of things, and not when the efforts of others have failed. A failure to appreciate this fact is, I am sure, the cause of many of the disasters of childbirth.

8. The problem of abortion lies very largely outside ordinary midwifery practice, and it has its own peculiar difficulties and dangers, which are too various to be dealt with here.

### **Recommendations.**

1. The establishment of a Public Maternity Service on a national basis.

Although this is not a recommendation to which you as a local authority can give effect, I put it here in the forefront, because I am convinced that it is the only recommendation that is of fundamental importance, and the only recommendation which, if put into operation, will be calculated to materially reduce the maternal mortality. The medical profession and midwives' organisations have been urging the great need of a national midwifery service for years, and it seems to me that the matter is one of such vital importance that Parliament should deal with it without delay.

A national midwifery service should be available for the wives of all persons insured under the National Health Insurance Act, all insured women, and all women of a like class, whether insured or not. The financial basis would be insurance or some similar method, and the necessity to pay for the actual services rendered during pregnancy or confinement, whether medical, nursing or hospital, should not arise. Such a service should at least provide for each pregnant woman the following essentials:—

- (1) A trained midwife.
- (2) A doctor to conduct the ante-natal examinations and attend at the confinement, if required.
- (3) A consultant obstetric specialist.
- (4) Hospital accommodation for all ante-natal and confinement cases who require it. An obstetric specialist should be on the staff of such hospitals.

There are those who consider that all doctors working in a National Maternity Service should have special experience of obstetrics, and there is much to be said for this view.

I am also of opinion that there is a real need to extend the training of midwives and to improve their status and remuneration. A midwife should not be regarded as an inferior kind of nurse, as she is at present, but her training and her status should approximate to that of a nurse trained in a general hospital. She should be an integral part of the maternity service, with adequate salary and satisfactory conditions of work.

2. I also suggest that the following steps might be taken with advantage.

- (a) Further publicity regarding the importance of ante-natal care.
- (b) Circularising medical practitioners on the subject of maternal mortality and its prevention, reminding them that the services of the Ante-natal Clinic are available for their patients, if they so desire, and that the services of a consultant are available, free of charge.
- (c) Provision for the further education of practising midwives in ante-natal work and in midwifery practice. Lectures and demonstrations on these subjects could be given at the Maternity Hospital.
- (d) Payment of fees lost by midwives, when their booked patients are admitted to the Maternity Hospital on medical advice.
- (e) Further publicity that services of Municipal Midwives are available as maternity nurses, and that in necessitous cases fees will be reduced or remitted.
- (f) Circularising midwives with regard to the supply of sterilised confinement outfits, and supplying such outfits free or at reduced price to necessitous cases.
- (g) Facilities for giving Contraceptive advice to married women, who, on medical grounds, should not become pregnant.

I need only add that the above recommendations (*a* to *g*) have been approved by the City Council and have been given effect to. The Council has also expressed its agreement with the first recommendation. It may also be reassuring to know that during the 6 months preceding the writing of this report (May, 1935) there has not been a single maternal death in the City, although there has been no change whatever in the Maternity Services. To a certain extent this bears out my



hypothesis, that Maternal Mortality is subject to a law of periodicity, and that Wakefield may now have passed the height of the wave, and may expect a steady decline in the future.

## ORTHOPÆDIC AND ULTRA VIOLET-RAY CLINICS.

(By Dr. Jessie Eeles).

These Clinics were held during 1934 at the Principal Child Welfare Centre as in the previous year.

### Orthopædic Clinic.

During 1934 the work of the Orthopædic Clinic continued on the same lines as before. Dr. Crockatt attended once a month to see cases requiring his advice, and the Clinic was open daily for treatment. New cases are now dealt with on Friday mornings at 10 a.m. During the year 106 Wakefield patients attended the Clinic. Of these, 48 were new cases and 58 were carried over from 1933. Of the 106, 56 remained on the register at the end of 1934, 17 ceased attending, and 50 were discharged. The total attendances numbered 935.

In addition to the Wakefield cases, 30 patients from outside the City attended by special arrangement. 25 of these were Tubercular cases from the West Riding. The total number of attendances put in by these 30 patients was 49.

The following is an analysis of Wakefield cases treated in Kirbymoorside Orthopædic Hospital during 1934.

	Cases remaining in Hospital at the end of of 1933.	Admitted during 1934.	Discharged during 1934.	In Hospital at the end of 1934.
Education ...	3	4	5	2
Health ...	3	3	3	3
Mental and Child Welfare ...	3	1	4	0
Totals ...	9	8	12	5

In addition there were two Health Committee cases in Heatherwood Orthopædic Hospital at the end of 1933, and these children were both discharged in 1934.

The following table is a summary of the year's work of the Orthopædic Clinic:—



DEFECT.	New Cases.				Old Cases.				Seen by Orthopaedic Officer.	Total Attendances.	Treatment Recommended.								Discharged.			Ceased Attending.	Remaining on Register.	
	Total.	Education.	Health.	Mental and Child Welfare.	Total.	Education.	Health.	Mental and Child Welfare.			Observation.	Orthopaedic Clinic.	Ultra-Violet Ray Clinic.	No Treatment.	Hospital.	Surgical Appliances.	X-Ray.	Plaster.	Cured.	Improved.	No Change.			
Rickets ... ..	1	1	—	—	3	2	0	1	4	6	1	—	2	—	—	—	—	—	2	—	—	—	—	2
Knock Knee (non-rickets) ...	—	—	—	—	3	—	—	3	3	10	2	—	1	—	—	—	—	—	2	—	—	—	—	1
Bone and Joint Tuberculosis ...	4	—	4	—	11	—	11	—	15	73	9	2	1	—	2	2	—	1	—	—	—	1	—	13
Clubfoot ... ..	2	—	—	2	8	7	—	1	10	86	4	1	—	—	3	2	2	1	—	—	—	—	—	9
Congenital Dislocation of Hip	1	—	—	1	3	—	—	3	4	23	2	—	—	—	1	—	1	—	—	—	—	—	—	4
Structural Scoliosis ...	—	—	—	—	3	3	—	—	3	70	—	3	—	—	—	—	—	—	—	—	—	—	—	3
Flatfoot ... ..	9	8	—	1	5	4	—	1	11	242	1	9	—	4	—	—	3	1	—	—	—	2	—	8
Infantile Hemiplegia and Paraplegia ... ..	1	—	—	1	2	1	—	1	3	11	2	1	—	—	—	—	—	—	—	—	—	—	—	3
Anterior Poliomyelitis	1	—	—	1	4	4	—	—	5	34	1	2	—	—	1	2	1	—	—	—	—	—	—	4
Erb's Paralysis ... ..	—	—	—	—	2	1	—	1	2	52	—	2	—	—	—	—	—	—	—	—	—	—	—	2
Postural Defects ... ..	5	5	—	—	5	5	—	—	—	113	—	10	—	—	—	—	—	6	—	—	—	3	—	1
Mouth Breathing	15	15	—	—	2	2	—	—	—	111	—	17	—	—	—	—	—	7	—	—	—	10	—	—
Various ... ..	9	7	—	2	7	5	1	1	14	104	4	5	—	4	3	2	3	4	2	—	—	1	—	6
Total ... ..	48	36	4	8	58	34	12	12	74	935	26	52	4	8	10	8	3	7	24	2	17	56		

## ARTIFICIAL SUNLIGHT CLINIC.

The treatment of selected cases by Artificial Sunlight was continued at the Principal Child Welfare Centre as in 1933. The accommodation and equipment were the same as before. Cases recommended for this form of treatment are now seen on Fridays at 10 a.m. for the first time. Cases are selected from schools, from the School Clinic, from the Orthopædic Clinic, from Child Welfare Centres, from the Tuberculosis Dispensary, and some are sent by their private doctors. Only 4 sessions were held weekly in 1934, because the premises and staff had to be utilised for extra immunisation clinics. The total number of attendances during 1934 was 5,498, and the following table gives a resumé of cases treated :—

DEFECT.	Total Attendances.	Number of Cases.							Ceased to attend.		Discharged.	Remaining on Register.
		Total.	New.			Old.						
			Education.	Health.	Mental and Child Welfare.	Education.	Health.	Mental and Child Welfare.	After more than 10 Exposures.	After less than 10 Exposures.		
Rickets ... ..	451	22	1	—	7	5	—	9	6	4	4	8
Debility with:—												
(a) Nervous symptoms ... ..	693	27	12	—	7	8	—	—	6	2	5*	14
(b) Catarrhal symptoms ... ..	378	18	6	—	3	7	—	2	6	1	4	7
(c) Malnutrition and Anæmia	506	25	4	—	11	7	—	3	7	6	4	8
(d) Chains of Cervical Glands	200	12	6	—	—	4	—	2	3	—	5*	4
(e) Blepharitis ...	113	6	4	—	1	1	—	—	2	—	—	4
Non-pulmonary Tuberculosis ...	171	8	—	4	—	—	4	—	4†	—	1	3
Cervical Adenitis (non-tubercular)	254	10	3	—	3	2	—	2	1	3	2	4
Bronchitis ... ..	588	18	6	—	6	5	—	1	5	1	—	12
Asthma ... ..	75	1	—	—	1	—	—	—	—	—	—	1
Ophthalmia, etc....	397	12	4	—	—	8	—	—	4	—	5	3
Skin Diseases ...	732	20	6	—	7	2	3	2	2	1	6	11
Rheumatism ...	238	9	7	—	—	2	—	—	2	—	6	1
Minor Sepsis ...	182	7	3	—	3	1	—	—	—	1	2	4
Knock Knee (non- rickety) ... ..	293	10	2	—	2	1	—	5	3	1	3	3
Chorea ... ..	111	3	3	—	—	—	—	—	—	—	1	2
Pink Disease ...	38	2	—	—	2	—	—	—	—	—	—	2
Various ... ..	78	3	—	—	—	1	—	2	1	—	1	1
Total ... ..	5498	213	67	4	53	54	7	28	52	20	49	92

\* 2 on account of albuminuria.

† One left City.

The following is a brief account of the results obtained in the cases that completed their course of treatment and were discharged during 1934. Those who for one reason or another ceased attending before they were discharged are not included:—

### **Rickets.**

The number of cases of rickets treated each year is gradually diminishing. Only 3 cases completed their treatment in 1934. All 3 were much improved. One had knock-knee, and was treated with irons as well. The average duration of treatment was long—20 months. The average gain in weight was 6 pounds 11 ounces. The average age of the children was 2 years and 10 months.

### **Non-Rickety Knock-knee.**

3 cases were treated. One was cured, or cured itself, one got worse during treatment, and in spite of irons, but eventually began to improve, and has now practically recovered. The third case improved but was not cured.

As these cases tend to recover without treatment, and as the deterioration in one case definitely continued, after sunlight treatment was commenced, the value of this form of treatment in these cases is very doubtful.

### **Eye Cases.**

5 cases of phlyctenular keratitis, irritable cornea, and recurrent ophthalmia, were treated at the sunlight clinic. The average age was  $8\frac{1}{2}$  years. The average duration of treatment was 8 months. All were satisfactory on discharge and had no symptoms. The average gain in weight was 2 pounds 5 ounces. A satisfactory feature of these cases is that with Ultra Violet-Ray treatment corneal scars seem to become much less dense.

### **Rheumatism.**

8 children were discharged during 1934 after a course of Ultra Violet-Ray for rheumatism. Growing pains and recurrent sore throats were the most common manifestations. One case was discharged after 6 weeks and referred to her own doctor on account of the development of a cardiac murmur.



Excluding this case, the average age of the other 7 was 10 years and 8 months. The average duration of treatment was 8 months. The average gain in weight was  $5\frac{1}{2}$  pounds. Two were improved as far as their symptoms were concerned, and the other 5 had been free from symptoms for several months before discharge.

### **Chorea.**

One case was discharged during 1934. Treatment was begun in the active stage, and was continued for 5 months. The child gained 13 pounds 4 ounces, and was quite well on discharge.

### **Tubercular Adenitis.**

Two cases were treated, one after operation. In the second case the glands caseated within a month of commencing treatment, operation was performed, and the Ultra Violet-Ray treatment resumed afterwards. Both were 5 years old. The average duration of treatment was 1 year. The average gain in weight was 3 pounds 15 ounces. Both were well on discharge.

### **Non-Tubercular Cervical Adenitis.**

Two cases were treated. Both were 3 years old children with a tendency to suppurative complaints. The glands had quite disappeared on discharge. The average duration of treatment was 6 months, and the average gain in weight was only 1 pound 4 ounces.

### **Skin Conditions.**

This group includes 1 case of recurrent Impetigo, 1 case of Lupus, 2 cases of Psoriasis, and 2 cases of Eczema. The case of Impetigo did very well. The case of Lupus was cured after 16 months' treatment. The patch was the size of a half-crown on the neck. One case of Psoriasis got worse and one did not alter in the least. The cases of Eczema were the most satisfactory. The average age of these 3 children was 6 months. The average course lasted  $4\frac{1}{2}$  months. All three were quite free from any trace of rash on discharge. The average gain in weight was 3 pounds 15 ounces. Teething commenced and proceeded during the treatment without any recurrence of the trouble in 2 of the cases. The third had not yet cut a tooth when it was discharged at 7 months. External applications were not used during the course of treatment.

### Persistent Colds.

Two cases were given Ultra Violet-Ray Treatment, but in spite of continuing this for over a year in both cases, not much improvement was noted. The average age was  $8\frac{1}{2}$  years, and the average gain in weight 4 pounds 2 ounces.

### Debility.

This group is best sub-divided according to the symptoms accompanying the debility.

Four cases were simple cases of ordinary healthy children debilitated after illness—measles, pneumonia, and scarlet fever. All four did very well. The average age was  $7\frac{1}{2}$  years. The average course lasted 9 months. The average gain in weight was  $4\frac{1}{2}$  lbs. All were lively and well again on discharge.

The second group contained 4 children, all of them thin, languid, and bronchitic. Three of them had nervous symptoms as well. Their ages ranged from 1 year and 2 months to 11 years, the average being  $6\frac{1}{2}$  years. The average course lasted 14 months, and the average weight gained was  $7\frac{1}{2}$  lbs. In all cases, the bronchitis was much less frequently troublesome, and in the case of the child of 14 months the chest cleared completely.

The third group contained 5 children, thin, sallow, easily tired, some with otorrhœa or glands, or occasional blepharitis. The average age was 6 years 8 months. The average course was 7 months, and the average weight gained was 5 lbs. 10 ozs. All looked improved on discharge.

JESSIE EELES.

### MENTAL DEFICIENCY.

At the end of 1934, there were 91 mental defectives (41 males and 50 females) on the Register of the Mental Deficiency Authority. This list of cases does not include children coming under the jurisdiction of the Education Authority. They are classified as follows:—

		Total.	Males.	Females.
Under Orders	In Institutions ...	28	13	15
	Under Guardian-ship ...	3	3	—

Under Statutory Supervision	...	20	13	7
Poor Law Cases	In County Poor Law Institution	2	—	2
	In Institutions for Mental Defectives, maintained there by the Public Assistance Committee	...	3	2
	In receipt of Outdoor Relief	6	2	4
	...	29	8	21
		91	41	50

In addition to the above, there were 103 children (58 boys and 45 girls) between the ages of 7 and 16 years who had been certified to the Education Authority as feeble-minded.

### St. Catherine's Home for the Feeble-minded.

During 1934, 9 Wakefield patients (8 males and 1 female) were admitted to St. Catherine's Institution, of which 6 were transfers from other institutions. The transfer of these patients was made possible by accommodation for high grade male cases becoming available at the beginning of the year.

During the year, one patient (a female) died in the Institution, and at the end of the year there remained 28 mental defectives belonging to Wakefield, classified as follows:—

High Grade Males	...	...	...	...	8
High Grade Females	...	...	...	...	13
High Grade Boys (under 16 years)	...	...	...	...	4
Low Grade Males	...	...	...	...	1
Low Grade Females	...	...	...	...	2
					—
					28
					—

### Occupation Centre for Mental Defectives.

The Occupation Centre is managed on behalf of the Corporation by the Wakefield Council of Social Service, and Mr. Osbourn, the Secretary, has kindly supplied me with the following notes:—



At the end of 1934, 6 boys and 5 girls were attending the Occupation Centre, the average attendance during the year being 8 persons.

“ The work of the Centre has made steady progress.  
 “ A few changes have taken place, and the number attending  
 “ at the end of the year shows a slight increase over the  
 “ previous year.

“ Simple craft work, training in domestic duties, singing  
 “ and drill have been the main activities. It has been possible  
 “ to get a few of the young people to make or mend their own  
 “ clothing, and so take a pride in their general appearance.

“ Until early in the past year boys and girls have  
 “ attended at separate times. In April, the Centre was  
 “ changed into a mixed one as an experiment, though in  
 “ making this change care has been taken to avoid bringing  
 “ together older or more difficult boys and girls. The  
 “ experiment has so far been very successful. The boys have  
 “ been less boisterous, and the girls have given obvious signs  
 “ of a steadying influence. Moreover, the healthy rivalry  
 “ between boys and girls has encouraged a slight improve-  
 “ ment in the standard of the work.

“ The social side has again been well in mind, a day trip  
 “ to the seaside in the summer, and a party at Christmas were  
 “ memorable events in the lives of the young people attending  
 “ the Centre.”

The work of the Occupation Centre continues to receive excellent reports from the Inspectors of the Board of Control. The following is taken from the latest report:—

“ The Wakefield Occupation Centre is now run on the  
 “ following lines. The small children attend mornings and  
 “ afternoons. Big boys mornings only; big girls afternoons  
 “ only. Under the able supervision of Mrs. Rawlinson this  
 “ arrangement is working satisfactorily.

“ The children are trained to keep their classroom  
 “ clean, to wash their towels and to prepare their mid-  
 “ morning lunch and afternoon tea. It was gratifying to  
 “ learn, as a result of this training, several of the patients  
 “ are now much more useful in their own homes. The hand-  
 “ work done is now of a high standard. Certificates for it  
 “ have been won, and there is a ready sale for completed  
 “ articles.

“ They continue to have the use of the larger room with  
 “ piano for exercises and dancing.”

## SCHOOL MEDICAL SERVICE.

This service is intimately correlated with the general public health service. The medical work is carried out by the Medical Officer of Health and the three Assistant Medical Officers, and the work of the School Nurses is carried out by the six Health Visitors. In addition, there is a School Dentist, a School Clinic Nurse and an Orthopædic Clinic Nurse. The work embraces (1) Routine medical inspection of entrants, intermediate and leavers; (2) Supplementary medical inspection in the schools and at the School Clinic, including special examinations re Mental Deficiency, etc.; (3) Treatment of Minor Ailments at the School Clinic; (4) Vision refraction and prescribing of spectacles at the Ophthalmic Clinic; (5) Dental inspection and treatment; (6) Orthopædic and Ultra-Violet Ray Treatment; (7) Cleanliness Surveys and the following up of defective children by the School Nurses.

During 1934, the number of medical examinations amounted to 11,599, and 10,182 medical certificates were issued. At the Ophthalmic Clinic, 487 new cases were examined, with 973 attendances, and 436 prescriptions for spectacles were issued. The School Dentist inspected the teeth of 8,736 children, and found that 6,574 required treatment, although only 2,334 actually attended at the Dental Clinic for treatment. 106 children attended the Orthopædic Clinic, with 935 attendances, whilst 267 children attended the Ultra-Violet Light Clinic, with 5,498 attendances. At the Central Clinic for Minor Ailments, 1,209 children made 17,128 attendances, and at the Snapethorpe School Clinic, 351 children made 2,637 attendances. The School Nurses made 11,842 examinations with regard to cleanliness and condition of clothing and foot-gear.

The records of the routine medical examination of elementary school children showed that 78 per cent. had carious teeth, 25 per cent. defective vision, 17 per cent. disease of the throat and nose, 11 per cent. of the girls had verminous heads, 9 per cent. diseases of the lungs (mostly bronchitis), 7 per cent. enlarged glands (mostly cervical), 3 per cent. external disease of the eyes, 3 per cent. dull and backward, 2 per cent. defective hearing, 1 per cent. defective nutrition, and less than 1 per cent. each tuberculosis, mental deficiency, defective clothing and footgear. 14 per cent. were free from any defect. 28 per cent. were referred for treatment other than dental treatment, and 79 per cent. of these received treatment,



## HEALTH EDUCATION.

As usual, the arrangements for Health Week were made by the Social Service Council, and Mr. Osbourn has kindly supplied the following report:—

“Our Health Week programme for 1934 was of a general character, though we made a special appeal to young people. This appeal was made through the juvenile organisations, and I know that many of them responded by emphasising in some way the importance of healthy living.

“The juvenile organisations gave a combined display in the Drill Hall. This was well attended, and proved of value in showing the part played by these organisations in giving young people a healthy outlook on life.

“The usual lessons and addresses were given in the schools, and at the close of the week an essay competition was conducted in the Senior Schools, the subject being “Conditions of a Healthy Environment.”

“A special meeting for women was held in the Minor Hall. This was addressed by Dr. Mary Anderson, of Leeds. Speakers were also provided for the Zion Sisterhood and the Zion Brotherhood, and a special appeal was made to the clergy to make Health Week a special concern in their sermons and addresses.”

The distribution of the local edition of “Better Health” (1,000 copies monthly) was continued during the year.

## BLINDNESS.

I am indebted to the Secretary-Home-Teacher of the Wakefield Institution for the Blind for the following information:—

(a)	Total number of blind persons on the Register at 31st December, 1934	...	...	...	...	108
(b)	Distribution of the number given in (a):—					
	Children under 5 years of age	...	...	...		1
	Children in Special Schools	...	...	...		6
	Children awaiting admission to Special Schools					1
	Adolescents undergoing training	...	...	...		5



Adults undergoing training	...	...	...	—
Workshops employees	...	...	...	2
Home workers	...	...	...	4
Resident in "Child Memorial" Home for the Blind	...	...	...	7
Resident in Institutions	...	...	...	4
Adolescents and Adults resident in own homes				78

**Table showing Age Distribution of Cases on the Register:—**

	0—5 years.	5—16 years.	16—21 years.	21—30 years.	30—40 years.	40—50 years.	50—60 years.	60—70 years.	70—80 years.	80 and over.	Total.
Males ...	1	2	2	3	1	9	14	11	10	2	55
Females ...	—	5	4	—	1	9	4	18	11	1	53
Total ...	1	7	6	3	2	18	18	29	21	3	108

No. of Visits to persons in own homes	...	...	2,324
Lessons to persons in own homes	...	...	233
Pastime classes	...	...	65
Social Gatherings	...	...	21
Persons in receipt of Domiciliary Assistance	...	...	53

"During the year, 14 new cases (6 males and 8 females) have been placed on the Register. 2 cases (1 male and 1 female) have been decertified, 3 cases (2 males and 1 female) died, and 2 cases (females) left the town.

"14 clinics have been held by Dr. Kay Sharp, Certifying Ophthalmic Surgeon, and 59 persons examined.

"21 social gatherings have been held and a number of rambles were enjoyed during the summer months.

"We are grateful to the Wakefield Dramatic Society and the Wakefield Operatic Society for the invitations to their various productions. These events are much appreciated by our blind people.

"We tender sincere thanks to Major Greaves, Mr. and Mrs. E. Stonehouse for the pleasant evenings spent in their grounds, to Messrs. J. Bullock and Sons for the granting of free travelling on their conveyances, to all those people who have contributed to the success of our

“social evenings, and to all who have in any way given  
“of their time and service to brighten in some measure  
“the lot of those handicapped by blindness.

“On Tuesday evenings each week, the Welfare Centre  
“is open for games, music, etc.; pastime classes are held  
“Monday and Thursday afternoons, from 2.30 to 5 p.m.”

So far as I know, no special action has been taken under Section 66 of the Public Health Amendment Act, 1925, but the prevention of blindness has always received attention from the Corporation, particularly in connection with the prevention and treatment of ophthalmia neonatorum, which in the past has contributed considerably to the number of blind persons. There has, however, been no instance of blindness resulting from this disease in Wakefield for 17 years. The attention of the Education Committee has again been drawn to the great need for special educational facilities for school children suffering from high myopia (or severe short-sightedness), which sometimes ends in blindness. These children cannot be safely educated in ordinary classes, they are not bad enough to be admitted to blind schools, but should be educated by special methods.

The following is a list of the main causes of blindness found amongst the 50 cases who were examined and certified as blind within the meaning of the Blind Persons Act, 1920, during 1934:—

Primary Cataract	...	...	...	...	...	...	13
Congenital, hereditary, and developmental defects	...	...	...	...	...	...	9
Primary Glaucoma	...	...	...	...	...	...	7
Ophthalmia Neonatorum (1 doubtful)	...	...	...	...	...	...	7
Industrial Trauma	...	...	...	...	...	...	2
Non-industrial Trauma	...	...	...	...	...	...	3
Meningitis	...	...	...	...	...	...	2
Anterio-sclerosis	...	...	...	...	...	...	1
Tabes	...	...	...	...	...	...	2
Septicæmia (probably gonorrhœal 1, severe pyorrhœa and dental caries 1)	...	...	...	...	...	...	2
Syphilis (acquired)	...	...	...	...	...	...	1
Not stated	...	...	...	...	...	...	1

The 7 persons in whom the cause of blindness was Ophthalmia Neonatorum were all over 40 years of age, 2 being over 65 years of age.

METEOROLOGICAL TABLE, 1934.

BAROMETER CORRECTED.				TEMPERATURE.								RAINFALL.				SUN-SHINE HOURS.				
Mean 9 a.m.	Maximum Reading.	Date.	Minimum Reading.	Date.	Highest Maximum.	Date.	Lowest Minimum. (Screen).	Date.	Subsoil 6 ins.	Subsoil 1 foot.	Subsoil 2 ft.	Subsoil 4 ft.	Subsoil 20 ft.	Total Inches.	Greatest Quantity in 24 hours.		Date.	No. of days on which .01 or more fell.		
January ...	30.017	30.722	31st	28.705	14th	39.1	55.9	17th	26.3	1st	37.1	38.4	39.9	42.7	50.2	1.39	.30	13th	18	46.4
February ...	30.416	30.935	15th	29.731	28th	39.1	53.9	15th	25.2	2nd	37.4	38.4	39.5	41.8	49.7	.34	.29	27th	5	57.4
March ...	29.665	30.402	25th	28.607	15th	40.8	59.4	25th	24.8	14th	38.1	39.3	40.3	41.7	49.1	1.72	.41	10th	21	79.5
April ...	29.751	30.231	30th	29.074	24th	47.9	69.2	15th	25.0	7th	44.1	44.7	44.6	43.9	48.4	2.37	.44	11th	14	114.5
May ...	30.045	30.419	11th	29.305	16th	55.0	78.0	11th	32.1	17th	51.0	51.4	50.6	48.1	48.0	.90	.33	6th	14	163.6
June ...	30.060	30.367	3rd	29.540	22nd	60.5	80.0	17th	40.7	3rd	57.7	57.9	56.6	52.6	47.9	1.48	.33	8th	14	168.4
July ...	29.999	30.339	8th	29.567	31st	67.3	85.6	11th	47.2	4th	62.8	62.9	61.4	56.9	48.0	1.74	.62	13th	11	238.3
August ...	29.837	30.281	26th	29.324	2nd	61.8	75.8	18th	37.9	31st	58.8	60.1	60.4	57.8	48.5	.91	.30	5th	12	148.6
September	29.919	30.392	12th	29.615	2nd	59.9	77.7	28th	37.0	1st	55.5	56.3	57.1	56.1	49.3	1.82	.51	29th	16	131.6
October ...	29.869	30.385	8th	28.930	4th	51.4	71.3	7th	31.9	31st	49.2	51.3	52.9	53.6	50.0	1.62	.25	4th	22	59.0
November	30.039	30.576	25th	29.244	9th	41.8	53.0	22nd	25.6	1st	41.9	43.7	45.7	48.6	50.3	2.12	.67	9th	16	13.6
December	29.530	30.223	1st	28.653	15th	44.5	55.4	8th	31.0	21st	43.3	44.4	45.6	47.3	50.3	4.10	.71	6th	27	9.6
Totals for Year ...	359.147					609.1					576.9	588.8	594.6	591.1	589.7	20.51			190	1230.5
Mean ...	29.929					50.8					48.1	49.1	49.5	49.3	49.1					3.37 per day.

I am indebted to Mr. Robertson, the Parks Superintendent, for the Table given above.



